

# Stemmatology of a 16<sup>th</sup> Century Chronicle

– A comparison of traditional and computer-assisted methods for creating  
stemmata of Paulus Juusten's *Catalogus et Ordinaria Successio*  
*Episcoporum Finlandensium*

Marko Halonen/013044150

Master's thesis

Tutors: Dr. Tuomas Heikkilä & Dr. Laura Kolbe

General History

Department of Philosophy, History, Culture and Art Studies

Faculty of Arts

University of Helsinki



Tiedekunta/Osasto Fakultet/Sektion – Faculty Humanistinen tiedekunta		Laitos Institution – Department Filosofian, historian, kulttuurin ja taiteiden tutkimuksen laitos	
Tekijä/Författare – Author Marko Kalevi Halonen			
Työn nimi Arbetets titel – Title Stemmatology of a 16 <sup>th</sup> Century Chronicle – a comparison of traditional and computer-assisted methods for creating stemmata of Paulus Juusten's <i>Catalogus et Ordinaria Successio Episcoporum Finlandensium</i>			
Oppiaine Läroämne – Subject Yleinen historia			
Työn laji Arbetets art – Level Pro gradu -tutkielma		Aika Datum – Month and year 6.3.2012	Sivumäärä Sidoantal – Number of pages 127
<b>Tiivistelmä Referat – Abstract</b>  Tutkielma tutkii Turun piispa Paulus Juustenin 1500-luvulla kirjoitettaman kronikan, <i>Catalogus et Ordinaria Successio Episcoporum Finlandensium</i> , käsikirjoitushistoriaa. Kronikka on yksi harvoista keskiajan Suomea käsittelevistä teoksista ja se esittelee järjestyksessä kaikki Turun piispat alkaen legendaarisesta Pyhästä Henrikistä ja päättyen 1500-luvulle. Samalla se sisältää ensiarvoisen tärkeää tietoa keskiajan Suomesta. Teos on säilynyt ainoastaan kopioina (13 käsikirjoitusta, yksi kadonneesta käsikirjoituksesta tehty 1700-luvun editio sekä katkelmia), jotka poikkeavat toisistaan sisällöllisesti. Nämä kopiot muodostavat eräänlaisen sukupuun, <i>stemman</i> , jota tässä tutkielmassa tutkitaan: se pyritään rekonstruoimaan mahdollisimman todenmukaisesti. Kronikkaa ovat aiemmin tutkineet H. G. Porthan (1799), Wolfgang Schmidt (1942) ja Simo Heininen (1988), jotka myös julkaisivat kronikasta editioita ja käännöksiä. Ne kaikki edustivat aikansa parasta tutkimusta aiheesta, mutta perustuvat nykynäkökulmasta katsottuna puutteellisiin ja osin virheellisiin metodeihin. Tällä tutkielmalla on kaksi päätavoitetta: tutkia Juustenin kronikan tutkimushistoriaa sekä luoda uusia stemmoja käsikirjoitustraditiosta käyttäen useita stemmatologisia metodeja. Työn ensimmäisessä osassa luodaan kokonaiskatsaus Juustenin kronikan aikaisempaan tutkimukseen, stemmatologiseen metodologiaan ja esitellään kaikki kronikan säilyneet käsikirjoitukset, mukaan lukien tämän tutkimuksen aikana löydetty uusi käsikirjoitus sekä aikaisemmin vain vähän tutkitut katkelmat. Tämän katsauksen aikana osoitetaan selvästi, miksi aikaisempia Porthanin, Schmidtin ja Heinisen tuloksia Juustenin kronikan stemmasta ei voida pitää oikeellisina. Ne kaikki ovat paitsi metodologisesti vanhanaikaisia, myös stemmatologisessa mielessä puutteellisia. Työn toisessa osassa rakennetaan stemmoja Juustenin kronikan käsikirjoitustraditiosta käyttäen sekä perinteisiä tekstikritiikin metodeja (Lachmann–Maas) että moderneja, tietokoneavusteisia metodeja. Sitten viimeisen Juustenin kronikan stemmatologisen tutkimuksen (Heininen 1988), stemmatologiassa on tapahtunut merkittävä paradigman muutos, joka edellyttää myös tietokoneavusteisten metodien käyttöä stemmojen luomisessa. Tietokoneavusteisia metodeja ei olekaan koskaan aiemmin käytetty luomaan stemmoja Juustenin kronikan traditiosta, mikä asettaa aikaisempien tutkijoiden tulokset entistä kyseenalaisemmaksi ja subjektiivisemmaksi. Stemmoja rakennettaessa vertaillaan eri käsikirjoitusten katkelmia toisiinsa ja pyritään päättelemään käsikirjoitusten väliset kopiointisuhteet. Eri metodein aikaansaatuja stemmoja verrataan toisiinsa ja tehdään johtopäätöksiä stemmojen välisistä eroavaisuuksista. Tutkimuksessa käytetään perinteisen, tutkijan manuaalisesti tekemän stemman lisäksi kuutta tietokoneavusteista metodologiaa ( <i>PAUP maximum parsimony</i> , <i>PAUP neighbour-joining</i> , <i>RHM</i> , <i>Splitstree</i> , <i>Roelli–Bachmann</i> ja <i>Semstem</i> ). Tutkimuksessa osoitetaan, että tietokoneavusteisillä metodeilla on mahdollista saada aikaan yhtä tarkkoja tai jopa tarkempia tuloksia kuin perinteisillä metodeilla, käyttäen vain murto-osan perinteisten metodien viemästä ajasta. Tämä avaa aivan uusia ulottuvuuksia Juustenin kronikan sekä yleisesti vanhojen tekstien tutkimukseen.			
Avainsanat – Nyckelord – Keywords Stemmatologia, käsikirjoitukset, kronikat, Paulus Juusten			
Säilytyspaikka – Förvaringställe – Where deposited Keskustakampan kirjasto			
Muita tietoja – Övriga uppgifter – Additional information			

# Index

<b>1. Introduction .....</b>	<b>1</b>
<b>2. Objectives.....</b>	<b>5</b>
<b>3. Background.....</b>	<b>7</b>
3.1. Paulus Juusten.....	7
3.2. The Chronicle.....	8
<b>4. Methods.....</b>	<b>11</b>
4.1. Stemmatology .....	11
4.1.1. Traditional textual criticism (Lachmann-Maas).....	14
4.1.2. Other approaches to textual criticism .....	17
4.1.3. Modern computer-assisted stemmatology .....	20
4.2. Palaeography, codicology and philology .....	25
4.5. Creating stemmata of Juusten's chronicle.....	29
<b>5. Manuscripts of the Chronicle .....</b>	<b>33</b>
5.1. Manuscript B.....	34
5.2. Manuscript D.....	36
5.3. Manuscript Eo.....	38
5.4. Manuscript Ec .....	40
5.5. Manuscript G.....	41
5.6. Manuscript Gb.....	43
5.7. Manuscript L.....	44
5.8. Manuscript Lb.....	46
5.9. Manuscript M.....	47
5.10. Manuscript P .....	49
5.11. Manuscript Q.....	50
5.12. Manuscript R.....	51
5.13. Manuscript S.....	52
5.14. Manuscript V.....	53
5.15. Manuscript X.....	54
<b>6. Editions and Translations of the Chronicle.....</b>	<b>56</b>
6.1. Christian von Nettelbladt.....	56
6.2. Henrik Gabriel Porthan.....	56
6.3. Wolfgang Schmidt.....	58
6.4. Simo Heininen.....	61
<b>7. <i>Stemma</i> using non-computer-assisted methods .....</b>	<b>68</b>
7.1. The group GbQRSV under hyparchetype $\gamma$ .....	74
7.1.1. Manuscripts S and V in the <i>stemma</i> .....	79
7.1.2. Manuscript Q in the <i>stemma</i> .....	81
7.1.3. Newly discovered manuscripts Gb and R in the <i>stemma</i> .....	82
7.2. Other manuscripts under <i>hyparchetype</i> $\delta$ (Ec, Eo and P).....	86

7.2.1. Ec and Eo.....	<u>86</u>
7.2.2. Manuscript P's position in the <i>stemma</i> .....	<u>93</u>
7.3. Under hyparchetype $\beta$ .....	<u>94</u>
7.3.1. D, G and L.....	<u>94</u>
7.3.1. Lb and contamination in G.....	<u>95</u>
7.3.3. B, M, N and X.....	<u>96</u>
<b>8. Stemmata using computer-assisted methods.....</b>	<b><u>99</u></b>
8.1. Phylogenetic Analysis Using Parsimony, maximum parsimony (PAUP-mp).....	<u>99</u>
8.2. Phylogenetic Analysis Using Parsimony, neighbour-joining (PAUP, NJ).....	<u>102</u>
8.3. RHM, bootstrapping on.....	<u>104</u>
8.4. Splitstree.....	<u>106</u>
8.5. Roelli–Bachmann.....	<u>109</u>
8.6. Semstem.....	<u>111</u>
<b>9. Conclusions.....</b>	<b><u>113</u></b>
<b>10. Sources and Literature.....</b>	<b><u>119</u></b>
Archive sources.....	<u>119</u>
Printed sources.....	<u>120</u>
Literature.....	<u>121</u>

# 1. Introduction

This thesis is a stemmatological study of a 16<sup>th</sup> century Swedish chronicle of medieval bishops *Catalogus et Ordinaria Successio Episcoporum Finlandensium*. The chronicle was written by Paulus Juusten<sup>1</sup>, bishop of Åbo<sup>2</sup>, and is one of the most important historical sources concerning the Middle Ages in Finland, which then was a part of the Swedish kingdom. Already in the late 18<sup>th</sup> century Henrik Gabriel Porthan, ‘the founding father of Finnish historiography’ started studying the chronicle from a critical, academic perspective, and ever since medievalists, and church historians in particular, have been interested in the chronicle. Porthan’s study of the chronicle is even today regarded as one of the greatest academic achievements of its time in Finland. However, in spite of the wide interest towards the chronicle, no historical research concerning the textual history, or stemmatology, of this historical source has been made since the late 1980’s, when the latest edition and Finnish translation were published by Simo Heininen. It was he who for the first time attempted to reconstruct the history and dissemination of the texts. Since then methods for studying old texts from stemmatological perspective have evolved quite enormously and this makes new research concerning this important historical source essential. It is now for the first time possible to gather reliable information of its textual history.

Like all research which uses stemmatology or textual criticism as its approach, this thesis studies different existing versions of an old text, including its manuscript tradition, editions and translations. The aim is to create a family-tree or *stemma*, which represents how the text evolved through the centuries. This is important because before printing became available, starting from the 1450s, all texts were copied by hand. This is also the case for Juusten’s chronicle: copying by hand was still common in Scandinavia in the 1550s. Both unintentional mistakes and intentional additions and/or omissions occurred during the process of copying which changed the text, making each copy unique. In time many of these unique versions were copied several times, and gradually the family of various unique copies expanded, creating a family-tree with several branches, which is represented by a graph called *stemma*. Stemmatology’s importance lies in its usefulness for various types of historical research: it can help

---

<sup>1</sup> His first name appears in all manuscripts as Paulus. Sometimes authors have written his name in the Finnish form ‘Paavali’ or in the Swedish form ‘Paul’ or ‘Påvel’.

<sup>2</sup> This city is known today in Finnish as Turku and in Swedish as Åbo.

reveal how a text developed: what did the text originally include and how it was changed during the copying process. One can also try to find out by and for whom it was copied and where and when it was circulated.

At the very beginning of this paper, it is important to stress a couple of essential points concerning the text we are dealing with. First of all, Paulus Juusten's chronicle is not a modern book which exists in many identical copies in libraries. It was not originally printed at all, but written by hand, and there is not a single autograph manuscript left of it, written by Juusten himself. There are only hand-made copies from the 17<sup>th</sup> and 18<sup>th</sup> centuries (which all are, as explained before, unique) as well as a couple of editions and translations. This being the case, the chronicle's original physical appearance, as well as its original contents, are unknown to modern scholars. Each of the surviving manuscripts, editions and translations not only looks different, but also has a different text in it. This is why it is necessary to study the chronicle in the first place: to discover what it really is, as this is not obvious at all. And perhaps even more importantly, all of the different manuscripts, editions and translations tell a story about a late medieval text which was widely circulated, copied, edited and translated in a large area and for an extensive length of time.

As one does not know what the original version made by Juusten himself looked like, or what exactly was the text it contained, one cannot even say for certainty what the name of the book was! Instead, the chronicle is known by many names. It is written in Latin and normally referred to as either *Catalogus et ordinaria successio Episcoporum Finlandensium*<sup>3</sup> or *Chronicon Episcoporum Finlandensium*<sup>4</sup>. In Finnish one commonly refers to it with the translation of the latter Latin name: *Suomen piispainkronikka*<sup>5</sup>. However, because most of the surviving manuscripts use *Catalogus et ordinaria successio Episcoporum Finlandensium*, this name has also been chosen to be used in this thesis. The name of the chronicle used in different manuscripts, editions and translations will be explained further on in chapters 5 and 6.

---

<sup>3</sup> 'Catalogue and order of succession of Finnish bishops.'

<sup>4</sup> 'Chronicle of Finnish bishops'. Sometimes the word *Finlandensium* is replaced by *Aboensium*, which refers to the city of Åbo in Finland (Turku in Finnish). Each of the manuscripts is dealt with in detail in chapter 5.

<sup>5</sup> The Swedish equivalent is *Finland's biskopskrönika* (Translated by Wolfgang Schmidt, 1943).

Regardless of its complex history, the chronicle is a very important and rare source concerning the Middle Ages in Finland. It describes the reigns of 23–28 bishops<sup>6</sup> (from the 12<sup>th</sup> to the 16<sup>th</sup> century) of the diocese of Åbo<sup>7</sup>, which then was a part of the Swedish kingdom. It usually mentions where and when the bishop was born, how and when he became bishop, what where his deeds for the development of the church and how he died. In addition to the history of the diocese, the chronicle often also gives valuable information concerning the Scandinavian Middle Ages in general, making its study very important not only for Finland, but for all scholars interested in the period.

In order to obtain accurate historical information about Juusten's chronicle, it will be necessary to use not only one single method but to combine and compare different methods of historical research and of stemmatology. It will now for the first time be possible to compare different modern methods for discovering the *stemma*, or family-tree, of the chronicle's manuscript tradition, including the use of computer-assisted methods. Computer-assisted stemmatological methods are gaining more and more support among scholars today, making it very important to compare their results with traditional methods. Also some palaeographical, codicological and philological aspects will be taken into account, in particular when dating the manuscripts. This thesis is written as part of *Studia Stemmatologica*, a series of academic workshops which is funded by the Finnish Cultural Foundation.<sup>8</sup>

Today one can identify in total 15 different manuscripts of the chronicle. These are referred to as manuscripts B, D, Ec, Eo, G, Gb, L, Lb, M, P, Q, R, S, V and X,<sup>9</sup> each of which will be examined in detail in chapter 5. Each of these manuscripts has a different version of the chronicle and they also look very different. They also vary physically (size, material, amount of pages etc.) Two of the manuscripts, Gb and Lb, are actually only parts of other known manuscripts (G and L), but these parts have been written by a different hand as the rest of the text, making them *de facto* different manuscripts from a

---

<sup>6</sup> Different manuscripts include different number of bishops. See below chapter 5.

<sup>7</sup> *Diocesis Finlandensis*. Today this area corresponds roughly with the southern part of the Republic of Finland. This diocese was known from the 13<sup>th</sup> century onwards as the Diocese of Åbo (*Diocesis Aboensis*), and was divided in 1554 into two halves: the diocese of Åbo (South-West Finland) and the Diocese of Viborg (South-East Finland.)

<sup>8</sup> *Studia Stemmatologica*'s webpage at <http://cosco.hiit.fi/stemmatologica/>.

*Studia Stemmatologica*'s project statement at Finnish Cultural Foundation's webpage at <http://www.skr.fi/default.asp?docId=17847>.

<sup>9</sup> The first to refer to these manuscripts by Latin letters was H. G. Porthan who named manuscript M after its owner, archbishop Karl Mennander. Later more manuscripts were named by other scholars.

stemmatological point of view. This has not been acknowledged so far and thus analysing these manuscripts is very important for historical research. It has also been discovered that manuscript E has been written by two different hands and therefore the manuscript really includes two versions of the same text. For this reason the manuscript will be dealt with as two different versions, Ec and Eo.<sup>10</sup> Manuscript R was discovered by the author in 2011, and has never been examined before by previous scholars.<sup>11</sup> This ‘new’ manuscript and a detailed analysis of the special manuscripts Gb, Lb, Eo and Ec will bring a lot of new historical information about the chronicle.

Also all of the editions of Juusten’s chronicle will now be re-examined. Two of these are from the 18<sup>th</sup> century: von Nettelblatt’s edition<sup>12</sup> and Porthan’s edition<sup>13</sup>. The former is such an early edition, that some of the other manuscripts may have been copied from it. For this reason, it will also be examined in detail and compared to the other manuscripts. The latter edition also includes a very extensive commentary, making Porthan the first scholar to examine the text critically (Nettelblatt’s edition was mainly a transcription of one of the manuscripts, as will be explained later.) In the 20<sup>th</sup> century the chronicle was studied by two scholars: By Professor Wolfgang Schmidt<sup>14</sup> in the 1940’s and by Professor Simo Heininen<sup>15</sup> in the late 1980’s. Heininen’s edition can be considered as the first true modern critical edition of the text. It also includes its *stemma*, which will be one of the main topics of this thesis. After examining the editions and translations of the chronicle a new *stemma* will be presented, using a combination of different methods, both traditional and computer-assisted.

---

<sup>10</sup> Ec=E corrected Eo=E original.

<sup>11</sup> Manuscript R was found by the author from Svenska Riksantikvarieämbetets library in May 2011.

<sup>12</sup> von Nettelblatt 1728.

<sup>13</sup> Porthan 1799.

<sup>14</sup> Schmidt 1942, 1943a, 1943b.

<sup>15</sup> Heininen 1988a.



## 2. Objectives

This study has two main objectives:

- 1) To study the historiography of Juusten's chronicle from a stemmatological perspective.

This thesis will go through the whole history of the chronicle and its manuscripts, editions and translations from stemmatological perspective, and describes, as thoroughly as possible, how and with what results the chronicle has been studied, edited and translated in the past. The interest of the editors and scholars who have studied the chronicle has, until today, mainly been quite simple: to make an edition as correct as possible. Their aim has been, in other words, to discover what Juusten really wrote.

This objective also often meant ignoring all 'poor-quality' manuscripts and 'bad' editions/translations, which were not considered useful from the editor's point of view. Some of them, H. G. Porthan in particular, were also interested in the trustworthiness of the chronicle, and tried to find its mistakes. This traditional approach has been, as will be explained later, problematic for many reasons and therefore this study has another, a historian's, perspective: all of the different manuscripts, editions and translations are equally valuable and interesting when writing the history of a text. The differences in the manuscripts, the scribal errors they include and the 'wrong' choices made by the copyists, editors and translators of the past all tell a story, the importance of which is not diminished by the 'errors' they include.

In order to understand how and why the chronicle was copied, edited and translated during the centuries, all variants and possibilities must be taken into account. In this thesis no opinions are given about the historical correctness of Juusten's work. The purpose is to study the historiography of the chronicle, not to question its authority as a historical source for Finnish history. On the contrary, this thesis aims at producing accurate historical information about it.

The first objective will be dealt with in two chapters: 5 and 6. In chapter 5 all of the surviving manuscripts of Juusten's work will be examined and their origin, differences in contents and physical appearance shall be explained. This will help us to date the manuscripts and to place them into a historical context, which will be used later in this thesis when creating the *stemma*. This chapter is particularly important because of the fact that one new manuscript has been discovered by the author, a manuscript which was unknown to all previous editors of Juusten's chronicle.

In the next chapter the editions and translations of the chronicle will be presented in detail – for the first time in the historiography of Juusten's chronicle. The focus will be on three topics:

- a) The manuscripts each of the editors/translators used.
  - b) The principles they used when editing the text.
  - c) Their vision of the relationships between the manuscripts (=the *stemma*).
- 2) Create a *stemmata* to describe the relations of the different manuscripts, using both traditional and computer-assisted methods of stemmatology. The possibilities, results and possible problems of each method will also be analysed.

The stemmatology of Juusten's work has never been the primary objective of any of the previous editors or translators and they have only briefly touched this topic – in spite of the obvious importance of such an approach. In this study the traditional methods for textual criticism and the *stemma* created by them will be compared to various modern, computer-assisted methods. This will allow us to critically test the usefulness of both the traditional methods and the computer-assisted ones for historical research. In the end a new *stemma* of Juusten's chronicle will be presented, which is based both on traditional textual criticism and computer-assisted stemmatology. This new *stemma* will also include the newly discovered manuscript of the chronicle, ms R.

### 3. Background

#### 3.1. Paulus Juusten

Before going into details about the different manuscripts, editions and the stemmatological analysis about them, some more background information about the chronicle and its author is needed. Even though the chronicle has not really been studied from a stemmatological perspective, a lot of general historical research has been made about it, in particular by Simo Heininen, who also edited the chronicle in the 1980's. Heininen's general historical information is very accurate and reliable, even though his stemmatological views about the chronicle need to be updated, as will be explained later.

As far as it is known, the chronicle studied in this thesis was written by the bishop Paulus Juusten in the mid-16th century. Juusten was a Swedish bishop in the diocese of Åbo. Juusten was born into a merchant family in the Swedish city of Viborg around the year 1520. He attained the city's Latin school and after the death of his parents he moved to the city of Åbo in 1536. There he became a priest and worked in the diocese under bishop Martinus Skytte. In 1543 Juusten made a three-year study trip to Wittenberg (then the centre of Reformation), where he also attended Martin Luther's funeral. He then returned to Åbo in 1547 and was nominated as the first bishop of the newly-founded diocese of Viborg<sup>16</sup> in 1554. He served there until 1563, when he was elected as the bishop of the diocese of Åbo. Between 1569 and 1572 he served as the head of the ill-fated diplomatic expedition to Russia during which he was held in captivity by the Russians. After his release Juusten remained as a bishop of Åbo until his death in 1575. In addition to the chronicle mentioned above he also wrote a Finnish Mass book, *Se Pyhä Messu*, a catechism and a tale of the fates of his expedition to Russia.<sup>17</sup>

---

Great changes were taking place in the kingdom of Sweden and Europe in general during Juusten's lifetime. Martin Luther's protestant ideas gained wide support. Moreover, Juusten is commonly considered as one of the key figures of Reformation in Sweden, even though he is overshadowed by Michael Agricola and Olaus Petri. His

---

<sup>16</sup> Known Finnish as Viipuri.

<sup>17</sup> Heininen 2008, 63–67. Heininen 1988b, 11.

other works, *Se Pyhä Messu* and the catechism, written in the vernacular, are a clear demonstration of protestant ideas. Furthermore, in the chronicle he speaks very fondly of Mikael Agricola, the initiator of Reformation in the eastern part of the Swedish kingdom (i.e. Finland). In the case of the chronicle, however, he used Latin, which still was the language of the clergy and the learned in Finland (and in all of Western Europe). This means that the chronicle was mainly aimed for a well-educated, Latin-speaking, audience.<sup>18</sup>

---

### 3.2. The Chronicle

The text studied in this thesis is commonly known in Finnish as *Suomen piispainkronikka* (Finland's chronicle of bishops) and it is therefore necessary to explain a bit about what one means with the term *chronicle*. A *chronicle* (from Greek χρονικός (chronological))<sup>19</sup> usually means an old, in particular a medieval text, which records the important events of the past in chronological order. In addition to mere years, names and events, chronicles usually also include some historical narrative, which makes them different from pure year-lists, known as *annals*, even though the distinction is not always very clear. However, the most important aspect of a chronicle is the chronological order, not an elaborate style and this can be seen as a difference compared to other medieval historical texts, such as *historia* or *gesta*. In the latter two, it was most important to tell a high-quality story that could be used for educational purposes or for entertainment. The earliest historical works which can be regarded as chronicles were written in Late Antiquity and Early Middle Ages by authors such as Eusebius or Jerome. One of the characteristics (and a difference to ancient historical writings) was already present in these early works: the Christian linear approach, history dictated by God's steering. This perspective was followed by such famous European chroniclers as Isidore or Bede, which became the basic models for later medieval chronicles.<sup>20</sup>

---

This same idea of history being guided by God towards the salvation can be seen in Juusten's chronicle as well, making it very clearly part of the same tradition of historical

---

<sup>18</sup> Heikkilä 2009a, 88, 132.

<sup>19</sup> Dunphy 2010a, 274.

<sup>20</sup> Dunphy 2010b, 1714; Heullant-Donat 1997. Tahkokallio 2009, 41–42.

writing as other medieval chronicles.<sup>21</sup> Strictly chronologically speaking Juusten's chronicle is, of course, only barely late medieval, as it was written in the 16<sup>th</sup> century, making it more a product of Reformation or even Early Modern Period. It is clear that protestant ideas stimulated an interest towards ecclesiastical history in Scandinavia, and inspired other historical authors as well, like the well known early Swedish historian and bishop Johannes Magnus.<sup>22</sup> Juusten's chronicle should be seen in this context. The chronicle includes 27 bishops<sup>23</sup>, starting from the legendary first bishop of Finland, Henricus<sup>24</sup>, and ending with the 27th bishop, Juusten himself.<sup>25</sup> The author himself admits that the earlier parts of the chronicle are based upon older information, and he has himself mainly contributed to the latter part of the text.<sup>26</sup> Scholars agree that Juusten used as his sources several older Swedish manuscripts, as described by Simo Heininen, which are listed below<sup>27</sup>:

- a) *Turun annaalit 840–1593*. 'The Annals of Turku(=Åbo)'.<sup>28</sup>
- b) Ms D 358, Kungliga biblioteket, Stockholm, Sweden.
- c) Ms E 133, Uppsala universitetsbibliotek.
- d) Notes by Henricus Mathei, Palmskiöld Collection 311, Uppsala universitetsbibliotek, Sweden.
- e) The notes of Viborg. Palmskiöld Collection 311, Uppsala universitetsbibliotek.
- f) The excerpt of Palmskiöld. Palmskiöld Collection 312, Uppsala universitetsbibliotek.

Juusten's chronicle starts with a sort of a prologue, in which the author (presumably Juusten), explains the purpose of his work and gives a short introduction to the history of the Christianisation of Finland. The chronicle then lists the bishops and gives some facts (very briefly) about each of them. The first 16 bishops are mainly only mentioned,

<sup>21</sup> For example, in the prologue Juusten tells about his country which has been attacked by enemies but 'which God still has miraculously defended with his extended arm--' (Ms B 1r: '*quam deus tamen brachio suo extento mirabiliter defendit--*'.)

<sup>22</sup> Heikkilä 2005, 38–39.

<sup>23</sup> In fact, most of the surviving manuscripts include *less* bishops, and two manuscripts have 28 bishops. This notion will be dealt with in detail further.

<sup>24</sup> The name appears in manuscripts in this Latin form. The same name appears in Swedish and Finnish as Henrik and in English as Henry. In this study it is impossible to analyse very thoroughly the history of this name and so the one used in the manuscripts is chosen in order to avoid anachronism.

<sup>25</sup> Some manuscripts also include the 28th bishop.

<sup>26</sup> This is mentioned in the prologue of the text in all of the manuscripts. From ms B f. 1r: '*Collegi igitur nomina et vitam pontificum finlandensium, sicut praedecessores nostri eas antea descripta post se reliquerunt. Ubi illi cessarunt, adjeci ego maxime ab episcopatu domini arvidi kork, et sic deinceps.*'

<sup>27</sup> Heininen 1989, 32–54.

<sup>28</sup> Two much later manuscript copies of this work have survived: K 12a in Kungliga biblioteket, Stockholm and A 942 in Uppsala universitetsbibliotek. Heininen 1989.

with just a few lines of text for each of them. The 17<sup>th</sup> bishop, however, is a different story, and his life is no less than over 1 100 words long, making it the longest biography in the chronicle. Bishops afterwards are not this long, but still much longer than the bishops in the beginning. Most manuscripts end with either Juusten's predecessor, the 26<sup>th</sup> bishop, or with Juusten himself, i.e. the 27<sup>th</sup> bishop. However, some manuscripts (Q, R, S, V and Gb) only give a very brief account of Juusten, but have also added a brief mention about his successor, the 28<sup>th</sup> bishop. Simo Heininen, Wolfgang Schmidt, Aarno Maliniemi and others have studied the structure of the chronicle and its style in more detail. As the purpose of this thesis is mainly stemmatological, no further analysis of the content of the chronicle is made here.

## 4. Methods

In order to create the *stemma* of Juusten's chronicle and to discover the historical links between different manuscripts and editions, one needs to use several different methods, which are described in the chapters below. Firstly, the text of each of the different manuscripts can reveal us the textual interrelationships and help us to create the family tree, *stemma*, of the manuscript tradition based on variation between the manuscripts. For this purpose we need to use traditional methods of textual criticism, which were developed in the 19<sup>th</sup> and 20<sup>th</sup> centuries, and modern, computer-assisted, stemmatological methods. These two will then be compared in order to test the usefulness and correctness of these methods.

Palaeography is also needed to discover the historic changes of handwritings of the manuscripts. This information can help us to date different manuscripts and then place them into the *stemma*. Codicology can reveal us a lot of information about the physical appearance of the manuscripts and also help us to date them as historical objects. Some philological remarks will also be made, in particular when analysing differences between the manuscripts.

### 4.1. Stemmatology

15 manuscripts of Juusten's chronicle are known to us today. As the term *manuscript* implies (lat. *manus* = hand, *scribere* = to write), these are hand-written documents. Before the invention of printing in the 1450s, all texts were copied by hand, and this was continued long after the appearance of first printed books. None of the manuscripts of a certain text are, however, identical, but they include several (sometimes very considerable) differences. These different versions of the same text form its *tradition*. This is mainly due to the fact that copyists often made intentional or unintentional alterations to the text they were copying. He made a mistake with spelling, accidentally skipped a word or a line, or remembered the text incorrectly by heart. In many cases the language of the text was not the copyist's native language, thus making errors more frequent. The copyist might also add or remove something in order to make the text better, or, according to his knowledge, closer to the original. Sometimes scribes were

combining elements from two different manuscript versions, which added foreign elements to the copy created. These are called *contaminations*. Because of these factors, many ancient and medieval texts have for many words and sentences several different versions, or *variants*, which is the case also for Juusten's chronicle.<sup>29</sup>

---

When several copies of a certain text were made, the copies together can be seen as forming a tree-like pattern, in which all manuscripts are copies or exemplars of other manuscripts. A comparison could be made to family-trees used in genealogy. This tree is commonly known as a *stemma*.<sup>30</sup> In figure 1 one can see an imaginary *stemma* with 11 manuscripts. Latin upper-case alphabets A–D represent survived manuscripts versions of the same text, Latin upper-case alphabets in brackets (G), (E) represent known manuscripts, which are now lost, lower-case alphabets a–b represent hypothetical lost manuscripts and Greek lower-case alphabets α–γ represent hypothetical *archetype* and *hyparchetypes*.<sup>31</sup> *Archetype* means in textual criticism and in stemmatology the version of the text which is closest to the original. When the first change occurred in the process of copying a split in the *stemma* appeared, and the two versions copied from the archetype are *hyparchetypes*.

---

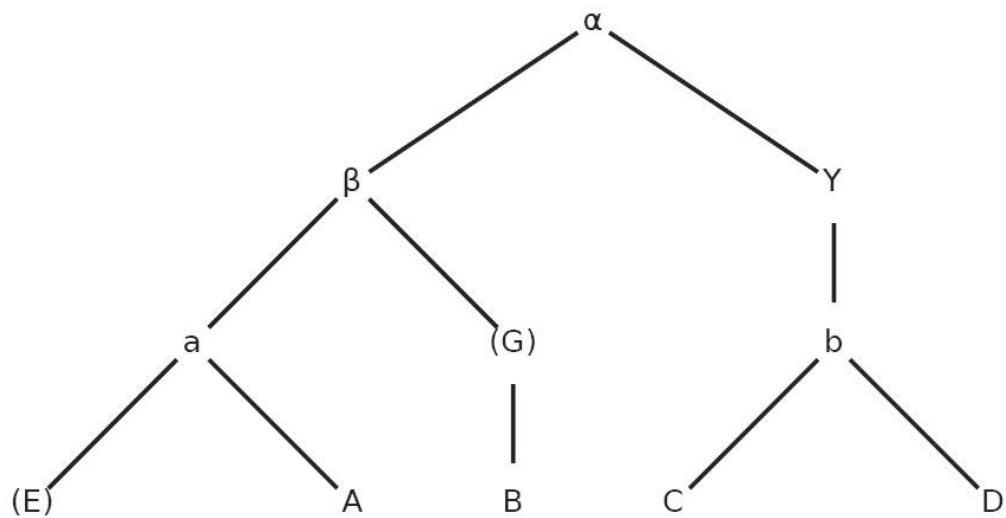
<sup>29</sup> Salemans 2000, 6; Heikkilä 2009b, 111–112.

<sup>30</sup> Heikkilä 2009b, 111–112.

<sup>31</sup> The practice of naming manuscripts this way is a common way, but not the only one.



Figure 1. An imaginary *stemma* with 11 manuscripts.<sup>32</sup>



*Stemmatology* can be divided into two types of stemmatology: *traditional stemmatology*, which is closely linked with *textual criticism*, and *modern or computer-assisted stemmatology*, which uses computer-based methods when analysing the texts. It should be mentioned, however, that debate concerning the terminology of stemmatology has not yet settled. Scholars disagree about various terms<sup>33</sup>, including the *stemma* itself, of which at least the following words can be used: *graph*, *tree*, *cladogramme*, *phylogramme*, *pattern*, *genealogy*, *map*, *net* and *network*. All of these are, nevertheless, attempts to show relationships between manuscripts and in that sense very similar. Some are originally developed for other purposes, such as a cladogramme, which is used to build genealogies of animal species. More stemmatological terminology will be explained in the chapters below.

<sup>32</sup> Drawn by the author and M.A. Yuan Zou.

<sup>33</sup> Because of this disagreement, the *Studia Stemmologica* is in the process of creating an online stemmatological vocabulary which will be published in 2012.

#### 4.1.1. Traditional textual criticism (Lachmann-Maas)

The roots of stemmatology are in the 19<sup>th</sup> and early 20<sup>th</sup> century, when German scholars Karl Lachmann and Paul Maas created strict principles for *textual criticism*, which are still commonly used by scholars, by philologists in particular.<sup>34</sup> These principles are usually referred to as the method of Lachmann, even though Lachmann himself never wrote a guidebook about the methods he used; this was done later by Paul Maas, who is generally considered as the founder of the actual method.<sup>35</sup> According to Maas's famous book *Textkritik* 'The task of textual criticism is to produce a text as close as possible to the original (*constitutio textus*).'<sup>36</sup> Using Maas's deductive methods, a scholar could reveal the relations between different manuscripts and decide which manuscript is the exemplar or copy of another, finally creating the full stemma and to reconstruct the original text as accurately as possible. Maas called this process *constitutio textus*. Maas's method is based upon a process with three steps and it has been, and still is, so widely used, that it is necessary to explain it briefly here:<sup>37</sup>

—

- 1) The *Recensio*, in which one tries to figure out the pattern of transmission between the manuscripts, in order to reconstruct (*constitutio textus*) the contents of the original, possibly lost, manuscript. If only one manuscript survives (*codex unicus*), one tries to decipher its contents as well as possible. This can be compared to detective's work because of language, handwriting, abbreviations, corrections and physical damage in the manuscript. If several manuscripts survive, the purpose of *recensio* is to deduct the relationships of the manuscripts and to discover a version as close as possible to the original, the *archetype* (*archetypus*), which represents the version of the text before the first split in the tradition occurred due to copying.<sup>38</sup> In figure 2 the archetype is marked with the Greek letter α.

—

- 2) The *Examinatio*, in which one takes a closer look at the archetype or *codex unicus* discovered in *recensio*. One now tries to find out whether this text can be considered a) as original as possible b) as original as some other versions, c) as a

---

<sup>34</sup> Heikkilä 2009b, 111–112.

<sup>35</sup> Bordalejo 2003, 48; Salemans 2000, 19.

<sup>36</sup> Maas, 1957, 1: 'Aufgabe der Textkritik ist Herstellung eines dem Autograph (Original) möglichst näheliegenden Textes (*constitutio textus*).' The first edition was published in 1927.

<sup>37</sup> Maas 1957.

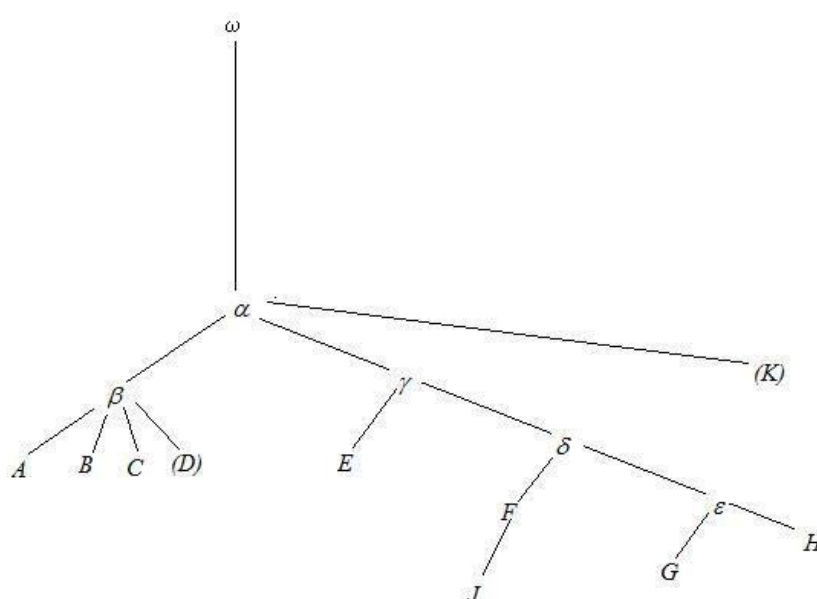
<sup>38</sup> Maas 1957, 6.

worse, but acceptable version or d) as an unacceptable version. If one can be sure that this version represents the original, the whole process is complete. If one concludes that the version is unacceptable, it must be rejected. If the version can be considered as being somewhere in between these former options (points c) and d)), one must move on to the third step of the process.

- 3) The *Divinatio*, in which the uncertain version discovered in *examinatio* will be ‘fixed’, by trying to restore it to its original form by removing all later additions or changes or/and by adding information lost due to poor corrections or physical damage.

This process is useful, in particular, for someone interested in making a critical edition of a text. For a historian, or a stemmatologist, the first step of the process, the *recensio*, is the most important one. It is therefore necessary to clarify this step a bit further using figure 2.

Figure 2. Maas’s *stemma*.<sup>39</sup>



<sup>39</sup>Maas 1957, 7.

According to Maas, one can deduce the relationships between the different manuscripts in the *stemma* by examining the errors the manuscripts have. Maas calls these errors *Leitfehler* or *errores significativi* ('significant errors')<sup>40</sup>. For example, in figure 2 manuscript J can be concluded to be a copy of F, if it includes all the same errors as F does, and in addition at least one error of its own (which cannot be found in any other manuscripts). This is, unfortunately, a rather unlikely case, and does not occur very often. Normally one must examine the errors themselves a bit more in detail in order to find out the relationship between the manuscripts. For example, if a manuscript, B, includes some, but not *all* of the errors in A, the method above does not alone reveal the relationship between A and B, but one must try to find what Maas calls separative errors (*errores separativi*, *Trennfehler*) and conjunctive errors (*errores conjunctivi*, *Bindefehler*).

A separative error can reveal us that a certain manuscript was not copied from another manuscript. Let us imagine the following situation: Manuscript A in figure 2 has an error. When we compare A to another manuscript, J, we can see that J *has not* made this same error. If we can be sure that this error *could not* have been corrected by J (that J did not have the knowledge to know how the text *should* be), we can prove that J was not copied from A at all, but from some other manuscript. For example, the scribe of manuscript A missed a whole line of a text when he was copying. Now the text in manuscript A makes no sense (because a whole line is missing), but it would be impossible for the scribe of J to know *what exactly* is missing and to add it absolutely correctly. If J, then, has kept this line which is clearly missing from A, we can argue that J is not a copy of A, but a copy of another manuscript, which had not missed that line (in this case F.)

A conjunctive error can show us that two manuscripts belong together against a third. For example, two manuscripts, A and B, both have an error which a third manuscript, E, does not have. If the error is such, that it would be highly unlikely that the scribes of these two manuscripts (A, B) coincidentally and independently made the same mistake, this means that two manuscripts, A and B, are either copies of each other or both copies of a same exemplar. For example, A and B both have omitted a whole line of text. It would be highly unlikely that they both simply accidentally omitted the same line (this

---

<sup>40</sup> Maas uses both the German and Latin version of the terms. In this thesis, the Latin one is used, since this is the one that also used in the 1958 English translation of Maas's book by B. Flower.

is of course possible, as Maas admits, but unlikely). It is much more likely that the line was missed by one of them, and the other copied this error, or that both A and B were copied from a fourth manuscript,  $\beta$ , which already had missed the line. If E has the line which was missed by both A and B (and  $\beta$ ), E is most likely copied from a fifth manuscript,  $\gamma$ , which did not miss the line, and not from A, B, or  $\beta$ . It would also be very unlikely that *both A and B* missed the *same* line when copying from E, and so E is unlikely to be their exemplar.

A scholar working on a *stemma* must go through all of the manuscripts and their errors, and using separative and conjunctive errors eventually create the correct *stemma*. When the *stemma* has been reached, one tries to reconstruct the archetype as well as possible. Thus all of the manuscripts in the end of the *stemma* will be ‘useless’, and they will be disregarded. For instance in figure 2 manuscript J would be useless from the textual criticism’s perspective, because it is only a copy of an older manuscript (F), which is closer to the original, and to the *archetype*.

#### 4.1.2. Other approaches to textual criticism

However, there are also other approaches to traditional textual criticism and strong criticism against the Maasian methods described above. Some scholars have argued that the whole idea of having an *archetype* that is *correct* is wrong; already the author made errors, which were later corrected by the copyist, and thus one cannot use errors to group the manuscripts.<sup>41</sup> This idea was put forward by Henri Quentin, who argued that instead of searching for errors and to reconstruct the archetype, one should simply find all the *variants* in the manuscripts and use these as the basis of grouping them.<sup>42</sup>

Further criticism towards the Lachmann-Maas method and support for Quentin’s ideas was given by Joseph Bédier, who argued that one should try to compare all the surviving manuscripts, and in case of differences among them, choose the best option, and not try to alter it in search for the *archetype*. In his edition of *Lai de L’Ombre* he decided simply to use one ‘good’ manuscript as a base text, instead of reconstructing the archetype and use that as the base text like Lachmann-Maas –method suggests.<sup>43</sup> This

---

<sup>41</sup> Bordalejo 2003, 49.

<sup>42</sup> Bordalejo 2003, 41–42.

<sup>43</sup> Bédier 1970, 17. [First edition 1929]

is known as the ‘Best-text editing’ or ‘Bédierist approach’, which has been followed by many scholars.<sup>44</sup>

---

Among some Anglo-American scholars, eg. G. Thomas Tanselle, also the ‘intentionalist school’ has gained support as well. The idea of ‘intentionalism’ means that the author of a text might have *intended* to write something, but accidentally made errors himself, which then *should* be corrected by editors.<sup>45</sup>

---

In addition, scholars disagree about how to call the different readings the manuscripts have. Maas called them ‘errors’ (*errores*, *Fehler*)<sup>46</sup>, but some prefer not to call them errors for the very reason that one cannot tell for sure, what the reading was, or was supposed to be, in the original text. This is why the list of alternative words for *errores* is very long: variant, disclaimer, innovation, modification, mutation etc. However, whatever word we use for the different readings the manuscripts have, it is still agreed among all traditional stemmatologists, that these readings and their grouping is the basis for creating stemmata and that this can, and should be done manually, each time carefully selecting the correct variant or *error significativus*.

It has also been pointed out that Maas did not take into his calculation the possibility of having an undefined number of lost manuscripts. As Sebastiano Timpanaro has pointed out, each manuscript might have been copied more than we think. If most of the copies are lost, it is very hard to know if all the survived and closely related manuscripts are all actually copies of one single manuscript or of several manuscripts, which share the same ancestor. In this case the number of possible stemmata expands quite rapidly, and also more intermediate manuscripts would appear. This means that most stemmata are usually very simplified, and this was not properly acknowledged by Maas.<sup>47</sup>

---

The Lachmannian-Maasian method has also been criticised for not being very scientific, because it is sometimes very hard to decide which errors count as *errores significativi* and which not, and thus the method’s principles are considered as vague ones, as e.g. Ben Salemans has pointed out.<sup>48</sup> E. Talbot Donaldson similarly claims that in the

---

<sup>44</sup> Bordalejo 2003, 44–45.

<sup>45</sup> Tanselle 1981, 29–30, 42–43, 46.

<sup>46</sup> Maas 1957, 27.

<sup>47</sup> Timpanaro 2005, 163–164.

<sup>48</sup> Salemans 2000, 5.

process of *Recensio* one is merely using ‘common sense’, which can lead to mistakes, when one has to decide which errors are really errors and also which of these errors count as significant ones. In other words, there is simply too much subjectivity in the method and it is based upon a false sense of security from discovering a mechanical system for discovering the *archetype*.<sup>49</sup> Also the Maasian way of leaving out some manuscripts, because they are (only)  $\overline{\text{copies}}$ , and leaving only the ones closest to the archetype is problematic, as well as Maas’s claim of contamination being unusual<sup>50</sup>, as e.g James Willis has pointed out.<sup>51</sup> In reality contaminations between the branches of a *stemma* are quite possible and likely, and it is equally possible that only one manuscript survives from a certain branch, making it look like a very peculiar witness.<sup>52</sup> This problem of selecting between the variants has been partly solved by the computer assisted methods, as will be explained later.

---

<sup>49</sup> Donaldson 1970, 108.

<sup>50</sup> Maas 1957.

<sup>51</sup> Willis 1972, 24–25.

<sup>52</sup> Willis 1972, 25.

### 4.1.3. Modern computer-assisted stemmatology

Modern stemmatology differs from traditional textual criticism in many fundamental ways. Firstly, using any of the methods described above can be quite time-consuming, as the manuscripts can form quite a few (=almost unlimited amount) different stemmata and have a huge amount of variants. As Maas mentions, already only 3 manuscripts can be arranged into 22 different stemmata and the number of possible stemmata grows rapidly to thousands when only a couple of manuscripts are added.<sup>53</sup> Facing so many manuscripts and possible stemmata, textual criticism based on the traditional methods has either tried to eliminate those manuscripts which are not closest to the archetype in order to limit the amount of texts (Lachmannian method) or to choose the best manuscripts (best-text editing) or to discover what the author intended to write (intentionalist school). All of these approaches, however, lead to a very subjective way of selecting manuscripts.

The texts can be so great in numbers and so long, that the human mind is simply incapable of analysing all the different variants and stemmata correctly. When manually comparing the variant readings, one must both correctly transcribe the text and correctly compare it to each variant reading – a task which becomes more and more difficult to complete with 100% accuracy over time, whereas the computer *always* does the comparison correctly, mistakes only arise if the computer is programmed incorrectly.<sup>54</sup> In modern approach to stemmatology one difference is thus that all members of a manuscript tradition should be taken into account and no manuscripts should be ignored.<sup>55</sup> This is possible with the assistance of computers, which can deal with this vast amount of data, unlike the human mind.

Secondly, traditional textual criticism was mainly only interested in creating a *stemma* in order to find the archetype, and to ‘correct’ the errors caused by copying, or in ‘best-text editing’ to find the best text. Modern stemmatology, on the contrary, is not solely interested in discovering the original, but has a wider interest in the whole copying process and the different variants created on the way, as well as how, where and when

---

<sup>53</sup> Maas 1957, 30.

<sup>54</sup> Robinson 1996, 73.

<sup>55</sup> van Reenen & van Mulken 1996, ix.



the manuscripts were copied and circulated.<sup>56</sup> From this perspective, the original is not necessarily correct, but can be incorrect, and so when an editor tries to ‘correct’ the text, he actually might *change* it.<sup>57</sup> From this perspective, all the different versions and variants (and their errors and contaminations) are just as important as historical source material.<sup>58</sup>

—

Modern stemmatologists have also discovered that stemmatology has a great deal in common with two branches of biology: cladistics<sup>59</sup> and phylogenetic systematic<sup>60</sup>. Both stemmatology and these branches of biology study an evolutionary history: the former studies the evolution of texts and the latter that of species, and with surprisingly similar methods.<sup>61</sup> In the same way it has also been realised that the differences between variants of a certain text are very similar to the differences that various closely related species have in their DNA.<sup>62</sup> Thus in the same way as different manuscript copies of a certain text form a tree-like structure, a *stemma*, related species form a *cladogramme* or a *phylogenetic tree*.

In a cladogramme species (or manuscripts in stemmatology) which have the same ancestor are placed under the same clade, or branch. For example, in figure 3 below, one can see that manuscripts S and V are placed together in the left, indicating that they have a shared ancestor (in this case marked simply with a black dot.) If we are talking about stemmatology, this would indicate that these two manuscripts are copied from the same text. If one also wants to show not only the ancestor of each species (or manuscript), but also how much evolution has taken place between two species or texts, one can use a phylogramme, in which the length of the branch represents the amount of changes that have occurred (figure 4).<sup>63</sup>

—

---

<sup>56</sup> Heikkilä 2009b, 114.

<sup>57</sup> Bordalejo 2003, 55.

<sup>58</sup> Heikkilä 2009b, 114.

<sup>59</sup> *Cladistics* is a method used by evolutionary biologists, which uses similar features in species to categorise them. See e.g. Lipscomb, Diana. 1998. *Basics of Cladistic Analysis* Online publication at <http://www.gwu.edu/~clade/faculty/lipscomb/Cladistics.pdf>. Page 6. Quoted 13<sup>th</sup> May 2011.

<sup>60</sup> The first to introduce phylogenetic systematics was Charles Darwin in his *The Origin of Species*. See eg. Campbell & Reece 2005, 497.

<sup>61</sup> Cameron 1987, 227; Heikkilä 2009b, 114.

<sup>62</sup> Windram et al. 1987, 230.

<sup>63</sup> Campbell & Reece 2005, 497, 499.

Figure 3. An unoriented cladogramme.<sup>64</sup>

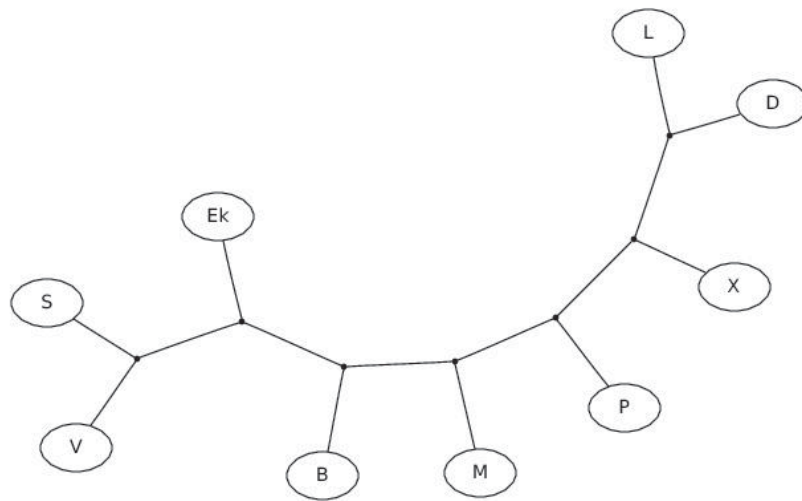
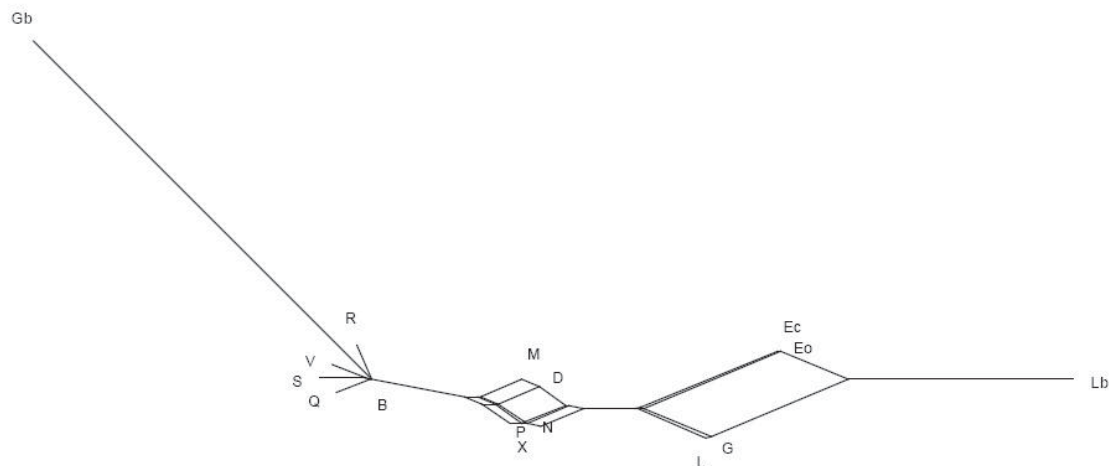


Figure 4. An unoriented phylogramme.<sup>65</sup>



In figure 4 one can see that manuscript Gb on top-left has evolved very much from manuscript B (or vice versa). This information might sometimes be very useful and gives a very different picture of the situation than a cladogramme, which simply shows the ancestor. Both figure 3 and 4 are unoriented, meaning that they do not show where the evolution started from. Sometimes also cladogrammes and phylogrammes are oriented, and the ancestor is placed at the bottom, forming the root of the tree from

<sup>64</sup> Drawn by Dr. Teemu Roos.

<sup>65</sup> Drawn by M.A. Yuan Zou.

which the tree grows upward. However, in a *stemma* used by stemmatologists one usually puts the ancestor on top and the ‘tree’ grows downward. Phylogrammes, cladogrammes and stemmata are all used in modern stemmatology to represent links between the manuscripts, depending on what one wants to visualise.

Once the similarities between cladistics and stemmatology had been discovered, scholars also noticed that many of the computer programmes developed for cladistic purposes could be extremely useful for stemmatological research as well. One of the first successful attempts to use the computer-assisted methods, originally designed for evolutionary biology, for stemmatological analysis was the Textual Criticism Challenge, organised by the Oxford-scholar Peter Robinson in 1991. In this challenge evolutionary biologist Robert O’Hara gained excellent results with his PAUP programme.<sup>66</sup> Robinson admitted that O’Hara’s programme had discovered the correct relations between the manuscripts in about five minutes, whereas it took Robinson a few weeks for the same work using traditional methods.<sup>67</sup> This is one of the greatest advantages of computer-assisted methods: using them one can quickly group the manuscripts, without having to leave out some manuscripts simply to reduce the amount of texts. Computer programmes, unlike the human mind, also use always the same principles for grouping the manuscripts according to variants, excluding the possibility of unintentionally missing some variants. One needs to be, however, well aware of the principles the programmes use, in order to get correct results.

Since the 1990’s several new programmes have been created for the purposes of stemmatological analysis. Lately also in Finland new methods have been created.<sup>68</sup> In this thesis 6 different computer-assisted methods have been used:

- 1) Phylogenetic Analysis Using Parsimony, maximum parsimony (PAUP-mp)
- 2) RHM
- 3) PAUP, neighbour-joining
- 4) Splitstree
- 5) Semstem
- 6) Roelli–Bachmann

---

<sup>66</sup> PAUP = Phylogenetic Analysis Using Parsimony.

<sup>67</sup> Robinson & O’Hara 1992.

<sup>68</sup> Roos & Heikkilä, 2009, 417–433.

The basic idea of these methods is that they group manuscripts according to the variants they have using different algorithms. They basically do the same thing that a traditional stemmatologist does manually: see which manuscripts are most likely related and what kind of genealogy can be made of them. They do not, however, create a ready *stemma*. The graph they create is not oriented: the computer cannot say which of the manuscripts is the oldest or most original, it simply shows how the manuscripts are related. A scholar is needed to see how the *stemma* should be oriented and draw conclusions of it. The differences between the computer-assisted methods used in this thesis will be explained in chapter 8, where it is also possible to explain why different programmes create different graphs and trees.

However, both traditional and modern stemmatology still face some problems with *contamination*, i.e. when a manuscript includes some parts which clearly are not coming from its known exemplar but from a third manuscript, and thus the copied manuscript is a combination of two exemplars. Modern stemmatology (unlike the Lachmannian method) no longer assumes that each scribe only used one manuscript as an exemplar, and did not combine several manuscripts. It is, on the contrary, nowadays commonly accepted that the scribes often used several exemplars, and this has been acknowledged by many modern stemmatologists.<sup>69</sup> But, even computer-assisted stemmatology has not (yet) finally solved the problem of *contamination*, which causes trouble, even for the computers. It would therefore be wrong to claim that the computers have solved everything, and that no traditional work is needed anymore, but the work of a stemmatologist is greatly reduced.<sup>70</sup>

---

---

<sup>69</sup> Heikkilä 2009a, 72.

<sup>70</sup> Bordalejo 2003, 63.

## 4.2. Palaeography, codicology and philology

Palaeography is the study of the history of scripts, their adjuncts (such as abbreviation and punctuation), and their decipherment.<sup>71</sup> In this thesis, palaeographic study is kept to a minimum, but it cannot be completely ignored. The main purpose of this study is to tell the history of the development of the chronicle, not to analyse the manuscripts palaeographically in detail. Certain palaeographical features were also standardised during the process of transcription, which will be explained in chapter 7.

In general one can say that all of the manuscripts of Juusten's chronicle are written in the Humanistic script, except for some Swedish place names, which are written in the Neo-Gothic or German style. The Humanistic script (also known in Scandinavia as the Latin style) can be easily observed in all of the manuscripts due to the characteristics that are very common for the script: roundness of aspect, well separated letters, avoidance of abbreviations, et-ligature, use of diphthongs (ae, oe).<sup>72</sup> The Humanistic Script spread to Germany (and also to Scandinavia) in the 15<sup>th</sup> and 16<sup>th</sup> centuries, when it was often used in this mixed way: Latin written with the Humanistic style and vernacular in German style.<sup>73</sup> In Sweden the Neo-Gothic (or German) style dominated all the way until the 19<sup>th</sup> century but Latin and other Romance language were often written in the Latin style.<sup>74</sup> This is also the case in most of the manuscripts of Juusten's chronicle.

One can also date the manuscripts palaeographically using certain characteristics that handwritten texts had during certain periods. 18<sup>th</sup> century scripts look very different from 16<sup>th</sup> century ones, making it possible to date (although not very precisely) manuscripts according to the style the letters have (eg. the letter u usually has a little mark above it up until the 18<sup>th</sup> century). This has been done already by previous scholars (Schmidt and Heininen), as will be explained later. After examining the texts, the author has seen no reason to question these datings.

---

<sup>71</sup> *Glossary for the British Library Catalogue of Illustrated Manuscripts*.  
<http://www.bl.uk/catalogues/illuminatedmanuscripts/glossary.asp>. Cited 28<sup>th</sup> June 2011.

<sup>72</sup> Brown 1990, 127.

<sup>73</sup> Bischoff 1990, 149; Svensson 1974, 35, 47.

<sup>74</sup> Svensson 1974, 35, 47.

Codicology studies not the contents of the books, but the books themselves as historical sources, taking into account all the possible information available.<sup>75</sup> Codicology can thus be described as ‘archaeology of books’.<sup>76</sup> This work will not have any particular focus on codicology or manuscript studies, but it is, however, necessary to go briefly through all of the surviving manuscripts of the chronicle from codicological perspective, because this can help one to date them and to discover valuable information about their dating and provenance.

In the 15 manuscripts of Juusten’s chronicle one can find numerous codicologically significant features. The first and foremost of them all is naturally the material, in this case paper, which can reveal a great deal of information for a scholar.<sup>77</sup> It is crucially important to remember that the paper used in the late Middle Ages and Early Modern Period was very different from the paper we use today; it was made of cloth rags, not of cellulose, like modern paper is. Rags were used to make paper throughout the Middle Ages, starting from the 13<sup>th</sup> century, all the way until the 19<sup>th</sup> century. When making paper out of rags, one chewed the rags into a mash which was then left to soak for some time. After the soaking the wet mixture was put into a mould made of a wooden frame with metal wires. Extra water was squeezed out and the paper was left to dry. The metal wires of the mould left clear markings, *wiremarks*, which can still be in the paper when it is ready, if one looks carefully through the paper against a light. In industrial paper, made of cellulose, one cannot see the *wiremarks*, and thus their absence reveals to a codicologist the late date of the paper used. The density of *wiremarks* also varied in different periods.<sup>78</sup>

*Wiremarks* reveal to a codicologist the method used to make paper, but they are not the only markings that can be found inside the paper. Another typical feature of medieval and early modern papers were *watermarks*, which were made by using a special metal frame in the process of making the paper, which then left its mark. Different paper manufacturers used different *watermarks*, which can be identified by a codicologist. Identification of the *watermark* can then reveal where the paper for the manuscript came

---

<sup>75</sup> *Glossary for the British Library Catalogue of Illustrated Manuscripts*.  
<http://www.bl.uk/catalogues/illuminatedmanuscripts/glossary.asp> Cited 28<sup>th</sup> June 2011.; Merisalo 2003, 14.

<sup>76</sup> Lemaire 1989, 2.

<sup>77</sup> None of the manuscripts are made of parchment, so this important medieval material, as well as papyrus, will not be dealt with in this thesis. For a basic introduction about these older materials, see e.g. Géhin (ed.) 2007 or Lemaire 1989.

<sup>78</sup> Zerdoun 2007, 23–26. Lemaire 1989, 28–34. Heikkilä 2009a, 25–26.; Merisalo 2003, 25.

from.<sup>79</sup> Many different types of watermarks can be found in the manuscripts of Juusten's chronicle as well.

Another important codicological aspect of manuscripts which is also linked to paper is the physical structure of the book and its pages and binding. Normally medieval and early modern books used folded sheets of paper, known by the Latin term *bifolium* (half of a *bifolium* is a *folio*). These folded sheets could then be put on top of each other, creating a leaflet, known as a *quire*. When two *bifolia* were put together, a quire with 2 sheets, 4 leaves and 8 pages was created (known as a *binio*). In a similar way a *trinio* (or *ternio*) had 3 sheets, 6 leaves and 12 pages, a *quaternio* was 4+8+16 and a *quinternio* 5+10+20 in terms of sheets, leaves and pages respectively.<sup>80</sup> Once the quire structure of a manuscript is known, it will be easy to say, for example, whether some pages or whole quires are missing or added into the book later.

It is also important to pay attention to the layout of the text on the pages and to certain aspects of it. The number of columns and lines and with what line-ruling is relevant for the general description of the text. Line spacing can be drawn, or it can be marked with little holes in the margin and its height can vary, which can in some cases reveal the manuscripts provenance or help to date it, as different heights of line spacing were used in different times and places.<sup>81</sup> It is also useful to know whether the manuscript has foliation (sheet numbering) or pagination (page numbering).

Marginal notes or notes on top of the words, (= *glossae*) as well as *colophons*<sup>82</sup> can reveal us how the manuscript has been compared to other manuscripts in different times and also give us information about the scribe. In the case of Juustens chronicle, some manuscripts indeed have marginal notes, which are quite fruitful in terms of historical research. Also all sorts of mentions of previous owners (*Ex Libris* –stamps) as well as old *signa*<sup>83</sup> marked by librarians can reveal information about the provenience of the manuscript. The terms *incipit* and *explicit* are also used when describing the manuscripts. *Incipit* means how a certain text or manuscript begins, with which words. This can be used to distinguish texts from each other as many old texts do not really

---

<sup>79</sup> Zerdoun 2007, 33–35. Heikkilä 2009a, 26; Merisalo 2003, 25.

<sup>80</sup> Fery-Hue 2007, 61–62; Heikkilä 2009a, 18–19, 164, 169, 170.

<sup>81</sup> Heikkilä 2009b, 60.

<sup>82</sup> A *colophon* (Gr. κολοφών) is a term used for messages added by the scribe in the end of a manuscript, e.g name of the copyist, date and place of copying. Muzerelle 2007, 158; Lemaire 1989, 165; Heikkilä 2009b, 52.

<sup>83</sup> A *signum* is a code in archives that tells to which collection the manuscripts belongs to.

have a title in a modern sense. Similarly *explicit* refers to the very last words or sentences of a text.<sup>84</sup>

---

Using all of the codicological information described above a scholar studying an old text can try to date and localise the text and use this information (in the case of a stemmatologist or historian) to place the text into the *stemma* and into a wider context. The codicological information derived from a manuscript can very often create a *terminus ante quem* and *terminus post quem*. The former is the limit before which the manuscript has been made and the latter gives the latest possible date for its fabrication.<sup>85</sup>

---

Philology is usually an umbrella term for the study of texts. It tries to place them into a historical context in terms of their linguistic aspects and contents. In this study a small amount of philological information is also used when dating the manuscripts (which in turn helps one to place the manuscripts into the *stemma* correctly.) All of the manuscripts of Juusten's chronicle are written in Latin, but none of them uses pure Classical Latin. The Latin the texts have can be seen as representing the so called Neo-Latin, into which Medieval Latin changed in Europe around 14<sup>th</sup> and 15<sup>th</sup> centuries.<sup>86</sup> Therefore all of the manuscripts include many linguistic aspects which were typical of Neo-Latin (and were typical of Medieval Latin as well).

Some general aspects of the manuscripts' text also need to be mentioned. Punctuation varies a great deal in many of the manuscripts. This reflects the fact that commas, colons and dots were often used as signs for different kinds of pauses when reading aloud, not in the modern sense of syntactic division of sentences.<sup>87</sup> Abbreviations are also commonly used in all of the manuscripts, and many of these are very typical of medieval and early modern Latin. When comparing the manuscripts (both for non-computer-assisted and computer-assisted methods), *all* abbreviations have been opened so that the comparison will not be hindered by them. In practise, of course, everyone reading the text would normally understand the most common abbreviations, such as & for et, d. for *dominus*, b. for *beatus*, eccla for *ecclesia* and so on.

---

<sup>84</sup> Poiré 2007, 188–189.

<sup>85</sup> Leimairé 1989, 204.

<sup>86</sup> Sidwell 1995, 6.

<sup>87</sup> Bischoff 1990, 169.



## 4.5. Creating stemmata of Juusten's chronicle

When creating the *stemma* of Juusten's chronicle in chapter 7, it is important to use all the available methods. Only then will it be possible to have correct results and a correct *stemma*, which can then be analysed by further study. For this reason the *stemma* below is *not* only based on Lachmannian-Maasian method nor any one method, but is rather a combination of many methods. This approach (of using a combination of methods) has lately been adopted by other Finnish scholars as well, e.g. Tuomas Heikkilä.<sup>88</sup> The process for creating the *stemma* has been the following:

### 1) Transcription of all of the manuscripts.

This is necessary for many reasons. Comparing the texts becomes much easier and for the computers it would not even be possible to deal with non-transcribed texts. It is very important to transcribe each and every manuscript in the same way, meaning that different ways of spelling a word is regulated. For example the Latin diphthong *-ae* and such letters as *s*, *c*, *v*, *u*, *w* must be written in the same way in each transcription, even if they are different in the manuscripts. Otherwise some of the computer programmes will not be able to analyse the data correctly. Transcription is, naturally, also essential when using traditional methods of stemmatology: without transcription the comparison of texts is very subjective.

### 2) Finding all of the variant readings in the manuscripts. In the present study, this has been done using the freeware programme Juxta<sup>89</sup>.

This freeware is created by the University of Virginia, and it simply marks the different readings, so that they are easier to spot. It does not create a *stemma* or give any information about relationships between the texts. The author is aware of the fact that Juxta might not be the best possible collation programme available, but has found it perfectly sufficient for this

---

<sup>88</sup> Heikkilä 2005, 396.

<sup>89</sup> <http://www.juxtasoftware.org/>.

work, where the main aim is not a critical apparatus of an edition, but merely discovering the variant readings quickly.

- 3) Looking into the different readings found by Juxta in order to see which ones count as important variants.

For example, in this study only certain variants have been chosen when dividing the manuscripts into groups. It is quite obvious that not all variants can be taken into account, as results would then be misleading. For example personal names, place names and regional differences in spelling are usually not counted as relevant variants. For example, if one manuscript spells the name Juusten as Jwsten, this is not a real difference. Nor is Iuusten, Iusten, Iwsten, Justen, as they all mean the same or are phonetically the same.<sup>90</sup> The differences are not, of course, irrelevant, but they mainly reveal one particular person's way of spelling a name, not necessary stemmatological links. In a similar way words like '*preciosa*', '*pretiosa*' or '*presiosa*' are not counted as significant variants, as their differences mainly tell about what kind of Latin spelling the scribe was using, not necessarily from which manuscript he was copying.<sup>91</sup> However, these differences are very interesting in terms of philology and linguistic history, and if the purpose of this work was to produce a critical edition, they should all be taken into account and mentioned in the critical apparatus and not transcribed in the beginning of the process.

- 4) Grouping the manuscripts according to the variants into the main branches of the *stemma*.

---

<sup>90</sup> E.g. in the case of Juusten's chronicle the following versions of the authors name are found: *Iuusten* Q, S, V; *Iusten* G, E, P; *Iwsten* D, L, N, X; *Juusten* R, *Justen* B, Lb, *Jwsten* M, X. Letters u and i were not yet used in a modern way in the 16<sup>th</sup>, 17<sup>th</sup> and 18<sup>th</sup> centuries.

<sup>91</sup> Such variants which are mainly due to different ways of spelling a same word cannot be considered as variants that count. Changing *preciosa* to *pretiosa* simply tells us that this scribe used a certain way of spelling due to geographical, cultural or stylistic reasons, but it does not prove that there is a stemmatological link between the manuscripts. In a similar way in English changing 'harbor' to 'harbour' would not prove that these two manuscripts are not linked, but rather that the latter scribe was (possibly) British, not American. See Salemans 1996, 10.

Manuscripts which clearly share many variants together (which are possibly also *errores conjunctivi*) are under the same branch or sub-branch. This means, in other words, discovering the deep-structure and manuscript relationships of the tradition. This creates an un-oriented chain or network, which will then be oriented into a *stemma*. This process of first generating the un-oriented chain and then the oriented *stemma* has gained support among many stemmatologists.<sup>92</sup> When presenting the final *stemma* of Juusten's chronicle also the significant readings are presented in a separate table.

- 5) Comparing each of the manuscripts in order to discover which different readings could count as *errores separativi*.<sup>93</sup>

These can then be used to see which manuscripts are not each other's copies or exemplars. This can be used to verify the results from 4) and to develop the *stemma* further, finally reaching a fully oriented *stemma*.

- 6) The results gained above will be constantly compared to palaeographical, codicological and philological aspects of the manuscripts as well as valid historical information.

In this way it is possible to organise the manuscripts chronologically within the *stemma*. If one can say for sure that one manuscript is much younger than another, it is clear that the former cannot be the ancestor of the latter. However, one must constantly be aware of the fact that the age of the manuscript is not necessary the same as the age of the text version. A 17<sup>th</sup> century manuscript can 'carry' a text which is a direct copy of a 12<sup>th</sup> century manuscript while a 15<sup>th</sup> century manuscript might be a copy of a copy of simply another 15<sup>th</sup> century manuscript. In this case the former manuscript (or its text) can actually be more accurate and useful than the latter.

---

<sup>92</sup> See eg. van Reenen & van Mulken 1996, x; Salemans 1996, 6.

<sup>93</sup> A very basic question is how many separative errors one needs to find to be able to prove the non-existence of a copy-exemplar relationship? This naturally depends on the case, but one very sure *error separativus* can already prove the case, whereas 10 unsure ones prove nothing.

In chapter 8 these results will be compared to several computer-assisted methods. This comparison can reveal possible faults in the manual, traditional method. After this comparison a final *stemma codicum* of Juusten's chronicle will be presented along with further methodological discussion.

## 5. Manuscripts of the Chronicle

As explained above, there are several manuscript versions of Juusten's chronicle. Each of the manuscripts is unique, both in terms of the text it contains and in terms of its physical appearance. In order to fully understand Juusten's chronicle, one also needs to understand what the surviving manuscripts are like. Each of the editions and translation of the chronicle is based upon some of these manuscripts. As far as we know, 12 manuscripts of Juusten's text have survived in different archives. Eleven of these were named by Porthan, Schmidt and Heininen as manuscripts B, D, E, G, L, M, P, Q, S, V and X. The author has named the newly discovered manuscript as manuscript R.<sup>94</sup> As mentioned already above, some of these manuscripts are in fact written by two different hands, making them actually two separate manuscripts in terms of contents. For this reason some of the manuscripts can be divided, creating more manuscripts: Ec and Eo, G and Gb, L and Lb, which gives us a total of 15 manuscripts. Each of the manuscripts is described below, giving the following information (where possible):

1. Current location and *signum*.
2. Content (*incipit*, *explicit* and how many bishops are included.)
3. Codicological description.
4. Palaeographical remarks.
5. Other information.
6. Dating.

This information will give one a good general picture of each of the manuscripts. The information is also vital later in this thesis where a *stemma* will be presented.

---

<sup>94</sup> Named as ms R because of the fact that it was discovered from the Swedish State Archive, *Riksarkivet*.

## 5.1. Manuscript B

1. Stockholm, Kungliga Biblioteket. Rål. F. 77
2. Content: *Incipit: 'paulus justen episcopus aboensis, honarabilibus juxta ac discretis viris dominis ecclesiarum pastoribus in finlandia constitutis gratiam et pacem a deo precatur in christo jesu domino nostro'. Explicit: 'cecidit corona capitis nostri, ve nobis, quia peccavimus.'* Includes 26 bishops.
3. Codicological description
  - a. General appearance: The booklet has hard covers. On the inner side of the hard cover one can see traces of an old printed Swedish work. First 4 pages are empty.
  - b. Material: Rag paper (clear 8 vertical wiremarks/page, lining 24mm).
  - c. Structure: 5 quires: 1<sup>st</sup> is a binio (8 pages, but the first page is glued to the cover, so in reality only 6 pages); the second quire is a trinio (24 pages); 3rd one is a bifolium (4 pages); 4<sup>th</sup> quire is a quinternio (20 pages) and the 5<sup>th</sup> quire is a trinio (12 pages, but the last 4 are glued to the cover, so in reality only 8 pages.) Last 7 pages are empty. In total 62 pages.
  - d. Folia (leave size) c.20 cm x 31 cm.
  - e. Ruling: no drawn lines. *Interlinea* about 11mm.
  - f. Pagination: pagination from 1 to 47 starts from the 7<sup>th</sup> page and ends on the 53<sup>rd</sup>.
  - g. Ink: light brown. On page 47 the text about Elias Brenner is in black (or dark brown) ink. There are also additions made with black ink, but they seem to be by the same hand.
  - h. Watermarks. Two different ones can be found: 1) The word 'qvi' with a bold font. 2) A shield with x:s, on it a crown and on the crown a cross, one lion on both sides of the shield. The latter is very similar to the coat of arms of Amsterdam, which has been identified in several manuscripts which have been dated to 1669–1710.<sup>95</sup>
4. Palaeographical remarks. Style is possibly from the latter part of the 17<sup>th</sup> century or early 18<sup>th</sup> century. No German style is used. There is always a mark above letter *u*. Abbreviations are very rarely used.

---

<sup>95</sup> Lindberg 1998.

5. Other information: Inspected by Elias Brenner in 1714 according to a note in the end of the chronicle.<sup>96</sup> According to Heininen it is either a copy of Codex Brenner or a copy of  $\overline{\text{a}}$  manuscript close to it.<sup>97</sup> According to Schmidt it might be made by Brenner himself.<sup>98</sup> Last year mentioned in the manuscript is 1563.
6. Dating:.. *Terminus post quem* (*TPQ*) 1563, *Terminus ante quem* (*TAQ*) 1714.

---

<sup>96</sup> 'Cum meo originali concordare vidi Elias Brenner. Stockholmiæ d.22 Maj 1714.'

<sup>97</sup> Heininen 1988a, 35.

<sup>98</sup> Schimdt 1943b, 94.

## 5.2. Manuscript D

1. Stockholm, Kungliga Biblioteket. D 28.
2. Contents: *Incipit*: '*Chronicon Episcoporum Aboensicum*<sup>99</sup> paulus juusten episcopus aboensis, honarabilibus juxta ac discretis viris  $\overline{d}$ ominis ecclesiarum pastoribus in finlandia constitutis, gratiam et pacem a deo precatur in christo jesu domino nostro.' *Explicit*: '*Cecidit corona capitis nostri, vae nobis, quia peccavimus.*' 26 bishops.
3. Codicological description: Has external covers and a paper title page: '*Pauli Justen, Chronicon Episcoporum Aboënsium* (below Sign. D:28), added by the KB[?]. The title page is modern, industrial paper.
  - a) Material: Rag paper (clear 8 horizontal wiremarks/page lining 24mm).
  - b) Binding: 4 quires, first one with 4 folded sheets of paper, folded into a quire with 16 pages, the 2<sup>nd</sup> and 3<sup>rd</sup> quires are quaternios (both 16 pages); and the 4<sup>th</sup> and last quire is a bifolio (4 pages.) There is also one binio (8 pages), which is under the other quires, thus forming the first and last folia of the whole set. Last two pages are empty. In total 60 pages (excluding additions by the KB.)
  - c) Folia c.16 cm x 21cm.
  - d) Ruling: no drawn lines, but *interlinea* 7 mm. Smallest letters are 3mm high.
  - e) Pagination: no page numbers.
  - f) Ink: light brown, brown or dark brown (almost black) changes every now and then.
  - g) Watermarks. On several pages. A big crown, which has two thick x:s inside it. On both sides some kind of a standing animal/monster. On top of the crown an orb and on it a cross of triangles. This is most likely the coat of arms of the city of Amsterdam, see above ms B.
2. Palaeographical remarks. Possibly 18<sup>th</sup> century Latin style. When *u* is used as a vowel, it has a mark above it. *ae* marked as *a'*. Abbreviations are not common, mainly *dni* or *d.* for *domini/dominus* and *s.* for *sanctus*.

---

<sup>99</sup> The first 3 words are by a different hand than the rest of the text, see below point 4.



3. According to Heininen, it is a copy of ms L (1702) and could not therefore be earlier than that.<sup>100</sup> Several marginal notes refer to Messenius's chronicle, and therefore manuscript D cannot be earlier than 1611.
4. Dating. *Terminus post quem 1611*.

---

<sup>100</sup> Heininen 1988b, 30.

### 5.3. Manuscript Eo

Manuscript E is a special case among the manuscripts of Juusten's chronicle. It is a single manuscript, but the original manuscript has been later corrected in several cases, and these corrections change the contents of the manuscript quite extensively. Because of this fact, ms E must be seen as two different manuscripts: ms Eo (original) and Ec (corrected). Without making this distinction, one could place E into the *stemma* in a wrong way. It might well be that their differences are substantial from a stemmatological perspective.

1. Current location and signum: Stockholm (Sweden), Kungliga Biblioteket. Eng. B. IX:1:45.
2. Content: *Incipit: 'Paulus Justen, episcopus Aboensis. honorabilibus juxta ac discretis viris Dominis Ecclesiarum Pastoribus in Finlandia constitutes. gratiam et pacem a deo praeatur in Jesu Christo Domino nostro.' Explicit: 'Illo [?] anni 1547 captus est Johannes Dux Saxoniae a Caesar majestati die Marci Evangelistae'*. Includes 27 bishops.
3. Codicological description.
  - a. Material: Rag paper (clear 8 horizontal wiremarks/page width 25mm). Cover thicker, blue paper.
  - b. Structure: 2 quires, first one a septenio (28 pages); the second one an octonio (32 pages). Last two pages are empty.
  - c. Page size: Folio c.16 cm x 20,5 cm. Cover c. 33 x 20.
  - d. Ruling: no drawn lines, but *interlinea* 7 mm, smallest letters 3 mm high.
  - e. Pagination: no page numbers.
  - f. Ink: light brown on page 1, starting from page 2 dark brown and lighter colour coming back every now and then. Seems normal. NB! The corrections/notes in the margin and above the words are made with a different, light reddish brown ink, see below ms Ec.
  - g. Watermarks: On several pages and always the same: On top a cross. Below the cross a circle and below the circle an ellipse. On both side of the ellipse an oak leaf. Below the ellipse a cup/horizontal crescent. Below the cup a big crown. Under the crown three thick 3 x:s. On both side of the x:s a fox/other dog animal.
  - h. Ex libris. On the front page. (M. Benzelstierna).

4. Palaeographical remarks. Possibly 18<sup>th</sup> century Latin style. All *u*'s have marks above.
5. According to an Ex Libris on the front page, the Ms has belonged to M. Benzelstierna (1713–1791). According to Heininen, he later left it by will to Lars von Engeström.<sup>101</sup> It has also been compared to the Codex Brenner, according to a note in the margin.<sup>102</sup> There are also references both to Messenius's Chronicle (1611) and to Brenner's manuscript in the marginal notes. This would suggest that the manuscript can be no earlier than from 1611 and no later than from 1791 (when M. Benzelstierna died).
6. *Terminus post quem* 1611. *Terminus ante quem* 1791.

---

<sup>101</sup> Heininen 1988b.

<sup>102</sup> 'Explicit hoc manuscriptum El. Brenneri'.

## 5.4. Manuscript Ec

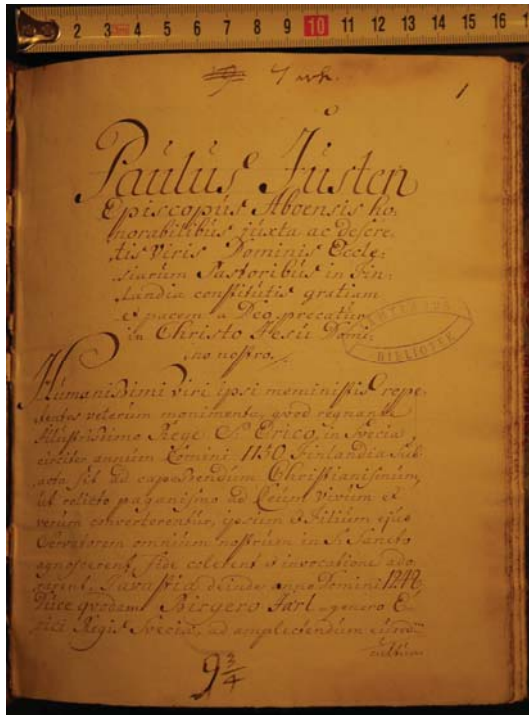
1. Stockholm, Kungliga Biblioteket.. Eng. B. IX:1:45.
2. Content: *Incipit: 'Paulus Justen, episcopus Aboensis. honorabilibus juxta ac discretis viris Dominis Ecclesiarum Pastoribus in Finlandia constitutes. gratiam et pacem a deo praeatur in Jesu Christo Domino nostro.'*<sup>103</sup>. *Explicit: 'Illo vero'*<sup>104</sup> *[?] anni 1547 captus est Johannes Dux Saxoniae a Caesar majestate die Marci Evangelistae'.* On the cover has '*Pauli Juusten Chronicon Episcoporum Finlandensium*'. 27 bishops. Codicological description. See ms Eo above. Ink used in Ec is different from Ec (lighter, redish).
3. Palaeographical remarks. The corrections are made with a style which seems to be from around the same period, there are no obvious differences.
4. Language.
5. See ms Eo above.
6. *Terminus ante quem* 1611. *Terminus post quem* 1791.

---

<sup>103</sup> The manuscript has also a marginal note in the beginning of the manuscript: '*descriptum ex ms [?] Archivi Regii.*'

<sup>104</sup> The word *vero* is a good example of the numerous additions made into ms Eo, thus creating ms Ec.

## 5.5. Manuscript G



Also ms G is a special case like manuscripts Eo and Ec, but in a different way. The recto-side of the back cover contains the lives of two bishops (the 27<sup>th</sup> and the 28<sup>th</sup>) with a totally different handwriting. Because of this these last two bishops must be seen as a different manuscript all together (see below ms Gb)

1. Östersund (Sweden), Jämtlands Läns Bibliotek. Z 11.
2. *Incipit: 'Paulus Justen Episcopus Aboensis juxta ac descretis viris Dominis Ecclesiarum Pastoribus in Finlandia constitutes gratiam et pacem a Deo precatur in Christo Jesu Domino nostro.' Explicit: 'Illo vere anni 1547 captus est Johannes Dux Saxoniae a Caesarea Majestate die Marci Evangelista.'*  
Includes 27 bishops.<sup>105</sup>
3. Codicological description
  - 1) General: Has hard covers. On the inner side of the hard cover there are mentions of previous owners.
  - 2) Material: Rag paper (clear 8 horizontal wiremarks/page, lining 24mm).

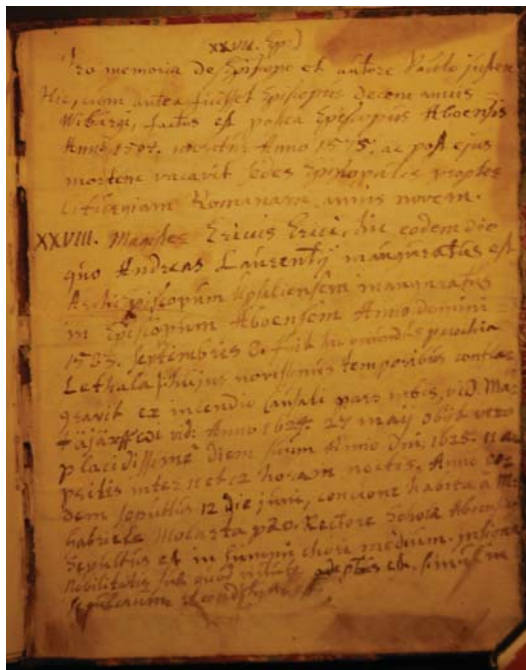
<sup>105</sup> The backcover of the booklet also includes a different version of the lives of the 27<sup>th</sup> and the 28<sup>th</sup> bishops. This will be dealt with in detail below with ms Gb.

- 3) Structure: 6 quires, first one a *bifolio* (4 pages, but 2 first pages are glued to the cover, so in reality only 2 pages); the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quires are all *quaternios* (16 pages each); 5<sup>th</sup> quire is a *binio* (8 pages), and the 6<sup>th</sup> quire a *bifolio* (4 pages). NB: The last quire might have originally been bigger, since the recto-side of the back cover also contains one page, which is glued into the back cover. Last 6 pages are empty (but the recto side of the back cover is not, see below). In total 16 *folia* and 62 pages.
- 4) Page size: *folio* c.16cm x 20,5cm.
- 5) Ruling: No drawn lines, but *interlinea* 7 mm. Smallest letters 2 mm high.
- 6) Pagination: pagination from 1 to 32 starts from page 3 and ends on page 34.
- 7) Ink: light brown. Pages 50, 51, 52 with a dark brown ink (same hand).
- 8) Watermarks. The same on all pages: A woman on the right, holding a hat in a stick. Below the hat a lion with a crown and a curved sword in hand. Next to the lion on the left the text '*PROPATRIA*'. This is very similar to a watermark discovered by Lindberg, which is dated to 1695.<sup>106</sup>
4. Paleographical remarks. Seems to be written with a late 17<sup>th</sup> century *Latin* style. Letters are quite separated, *u*'s are marked. Abbreviations are not very common.
5. Other information. On the backside of the cover, there is information about previous owners of the book: it has belonged to Abrahamus Ericus Gyllengriip and to Mathias Floderus from Uppsala. Last year mentioned in the manuscript is 1575.
6. Dating: *Terminus post quem* 1575.

---

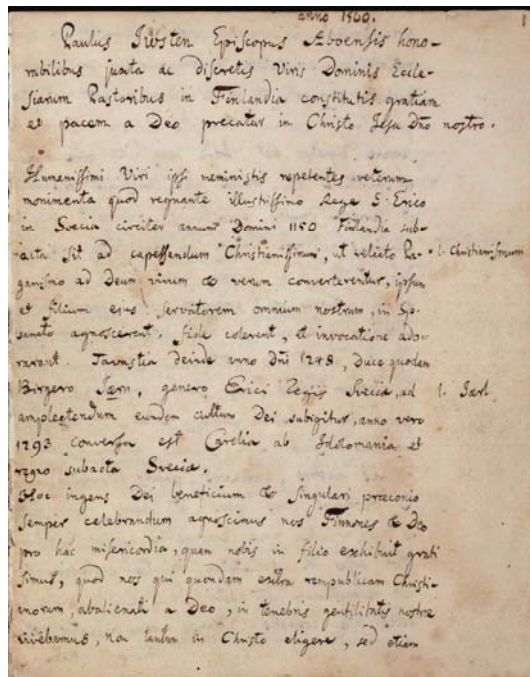
<sup>106</sup> Lindberg 1998.

## 5.6. Manuscript Gb



1. Östersund (Sweden), Jämtlands Läns Bibliotek. Z 11. (The same as above with ms G)
2. As mentioned above, ms Gb is only the last part of ms G (f. 63) and includes only the last two bishops, the 27<sup>th</sup> and the 28<sup>th</sup>. *Incipit: 'XXVII Episcopus. Pro memoria de Episcopo et autore Paulo Justen. Hic, cum antea fuisset episcopus decem annis Wiburgi'. Explicit: 'sepultus est in summum chora medium insigne nobilitatis sub quod virtute adeptus est. simul in sepulcrum et [] est.'*
3. Codicological description: See above ms G, there is no visible difference.
4. Paleographical remarks. Gb's style is very different than G's. It seems quite rough, to some extent it resembles the German style. Possibly also from the 17<sup>th</sup> century.
5. Gb includes the lives and deeds of two bishops: the 27<sup>th</sup> (Juusten) and the 28<sup>th</sup> (Ericus Erici Letalensis). Therefore Gb cannot be written by Juusten himself, but it is a later addition to the chronicle. The last year mentioned considering the 28<sup>th</sup> bishop is 1625.
6. Dating: *Terminus post quem* 1625.

## 5.7. Manuscript L



Like the two manuscripts above, E and G, also L is a special case, making it actually two different manuscripts: L and Lb (see below).

1. Linköping (Sweden), Linköpings stadsbibliotek i sifsbibliotekssamlingen B14 .
2. Content: *Incipit: 'anno 1500. Paulus Jwsten Episcopus Aboensis honorabilibus juxta ac discretis viris Dominis'. Explicit 'Cecidit corona capitis nostris, ve nobis, quia peccavimus. Descripti ex exemplari Domini Brenneri, 1702, mense Julio.'* Covers 26 bishops. (The last part of the manuscript, which contains the 27<sup>th</sup> bishop, is written by a different hand, and it is therefore considered as another manuscript, Lb, see below.)
3. Codicological description<sup>107</sup>
  - a. Structure: Three quires: The first and second ones are octernios (32 pages) and the third one a senternio (28 pages)
  - b. Folio size: 22,3 cm x 16,2 cm
  - c. Ruling: No drawn lines, *interlinea* 5 mm.
  - d. Pagination/foliation: Foliation on pages 1, 3, 5, 7, 9, 11 and 13. The rest have no pagination or foliation.

<sup>107</sup> The codicological description is based on the information given by the library (Linköpings bibliotek); the author has not seen the actual manuscript, only digital and paper copies.



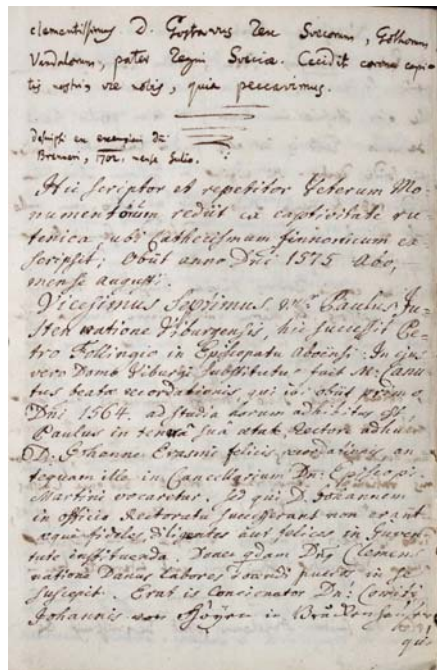
- e. Watermarks: The existing watermarks are impossible to describe, as they are blocked by the text.
4. Palaeographical remarks. Very early 18<sup>th</sup> century Latin style. *w* is used for *uu* in some cases, but normally a distinction is made between *u* and *v*. Abbreviations are not very common, mainly *dni* for *domini*
5. Other information: Old signum: Linköpings stifts- och landsbibliotek. B 24. According to Heininen, Ms L was made by Eric Benzeliu junior in July 1702.<sup>108</sup> After the 26<sup>th</sup> bishop there is an additional text: '*descripti ex exemplari domini Brenneri, 1702, mense julio*'. Bought by the library in 1757.<sup>109</sup>
6. *Terminus ante quem* 1702. —

---

<sup>108</sup> Heininen 1988b, 30.

<sup>109</sup> According to *Linköpings bibliotek*.

## 5.8. Manuscript Lb



1. Linköping (Sweden), *Linköpings stadsbibliotek i siftsbibliotekssamlingen*, B 14.
2. Content: As mentioned above, manuscript Lb is only the latter part of ms L (ff. 38–43), and therefore does not include a front page, but starts right after the explicit of L. Lb incipit: '*Hic scriptor et repetitor Veterum Monumentorum rediit ex captivitate rutenica, ubi cathecismum*'. Explicit: '*illo vere anni 1547 captus est Johannes Dux Saxoniae a Caesarea Majestate die Marci Evangelistae.*'
3. Codicological description: See ms L.
4. Palaeographical remarks. The style seems to be later than in ms L, possibly 18<sup>th</sup> century Latin style.
5. Old signum: Linköpings stifts- och landsbibliotek. B 24. Because the 27<sup>th</sup> bishop (ie. Juusten himself) is included, and also his death is mentioned, ms Lb cannot be written by Juusten himself, and must be later than from 1575, which is the last year mentioned in the text. It seems that this text was unfinished, as the last paragraph does not seem to end in a logical way.
6. Dating. See above ms L.

## 5.9. Manuscript M

1. Uppsala Universitetsbibliotek. E32 T 70.
2. *Incipit: 'Paulus Jwsten Episcopus Aboensis. Honorabilibus juxta ac discretis viris, Dominis Ecclesiarum Pastoribus in Finlandia constitutes, Gratiam et pacem a DEO precatur in Christo Jesu Domino nostro.' Explicit: 'Cecidit corona capitis nostril, vae nobis quia peccavimus.'* Includes 26 bishops.
3. Codicological description

- a. General: The chronicle forms only one part of a big volume, which includes several manuscripts. The whole volume has external hard covers. On the inner side (coververso) of the hard cover there are following mentions:
  - a. N. 7050
  - b. Skrifvet af C. F. Fredenheim
  - c. Ljungo Thomae, Pastoris Calajokiensi, finska öfversättning af Christopherr Langbok, uttagen och skänkt til åbo academia bibliothek den 14 julii 1791.
  - d. Cf. enim[?] Catal. 4. Juusten

The 3<sup>rd</sup> page has following information:

- a. Denna handskrift är upptagen i C. F. Fredenheims auktionskatalog 1805, s. 153 Hans Maunser in 4. ns 80 Kyrko herden Jonas Mathias Raumannus, var Fredenheims farfars farfar.
- b. Innehåll:
  - a. 1. Methodus Curae Pastoralis
  - b. 2. Någre kyrkie stadgar hefgdragne aff Guds Ordh, kyrkiordningen, konungars breef och gemeena beslut som på rijchsdaghar och prästmöter skedde ähre.
  - c. 3. Präst uthi lekamligh krankheet
  - d. 4. Domare Regler uthi Rätttegänger mykit nyttighe.
  - e. 5. Ett bref från biskof Paulus Juusten till det finska prästenskapet
  - f. 6. Catalogus et ordinaria successio episcoporum finlandensium
  - g. [1632 the latest year mentioned in the whole book]

- The recto-side of the back cover has a year listing of Finnish/Swedish history (1497–1630). Seems to be the same hand as in the chronicle.
- b. Material: Lump paper (clear 8 horizontal wiremarks/page, lining 24mm).
  - c. Binding: Has a different structure than the other manuscripts. The sheets do not seem to be bifolio sheets, but rather a bunch of folia binded together, making a thick quire. (i.e. there is no central string in the middle of the quire, as the pages are not folded) However, the quires seem visible, being 18–32 folia each. The chronicle forms the last part, with 25 folia. The last 14 folia are empty, as well as the verso of the last folio with text. In total 420 pages (207 folia).
  - d. Folio size: folia c.15,5 cm x 19,5 cm.
  - e. Ruling: no drawn lines, but *interlinea* around 4 mm. Smallest letters 1 mm high.
  - f. Pagination/foliation: pagination from 1 to 405 starts from page 5 and ends on page 410. The chronicle covers pages 361–381.
  - g. Ink: brown. NB! Marginal notes seem to be with the same colour.
  - h. No Ex Libris.
  - i. Watermarks. Some with three balls in a stick over a crown, some with a vase, some with a lily on a crown.
4. Palaeographical remarks. Written in a Latin style which seems to be from the 17<sup>th</sup> century. Abbreviations are very common in many words. Letters are often not connected to each other at all.
  5. The catalogue of the library tells: ‘*Upptagen i C.F.Fredenheims auktionskatalog 1805, s.153, bland manuscr. in 4: 0 nr 20. – Med Raumanus åsyftas Fredenheims farfars farfar kyrkoherden Jonas Mathiae Raumannus; se Leinberg, Åbo stifts herdaminne, s. 155.*’<sup>110</sup> Porthan got this manuscript from Archbishop Carl Fredrik Mennander and named it M after him.<sup>111</sup> He also estimated that it is from the mid- 17<sup>th</sup> century.<sup>112</sup> This happened possibly in 1782.<sup>113</sup> The last year mentioned in the manuscript is 1560.
  6. Dating: *Terminus post quem 1560. Terminus ante quem 1782.*

<sup>110</sup> Handskriftkatalog T. Teologi. Avskriften är avslutad den 1954., 36.

<sup>111</sup> Porthan 1784, 4.

<sup>112</sup> Porthan 1784, 4.

<sup>113</sup> Heininen 1988a, 28. Schmidt 1943a, 93.

## 5.10. Manuscript P

1. Porvoo, Borgå gymnasiums bibliotek. 11 879.
2. Contents: *Incipit: 'PAULUS JUSTEN EPISCOPUS Aboensis, Honorabilibus juxta ac discretis Viris Dominis Ecclesiarum Pastoribus' Explicit: 'Domin: 3. adventus decollatur Nicolaus Eschilli et Doctor Heming Gadd, ante castrum Rasborg per Roleff Martisson, a.c. 21. spoliatur civitas.* Includes 23 bishops. (The 23<sup>rd</sup> only partly.)
3. Codicological description<sup>114</sup>: The manuscript is a paper quire, 16x21 cm, 32 pages, of which the last three pages are empty.
4. Palaeographical remarks. Possibly 18<sup>th</sup> century. *V* and *u* are always distinct. *ae* is marked as *a'*. Abbreviations are not common. Mainly dni for *domini*, *S.* for *sanctus*.
5. According to Heininen, from the 17<sup>th</sup> century.<sup>115</sup>
6. Dating uncertain.

---

<sup>114</sup> Based on the information given by the library.

<sup>115</sup> Heininen 1988a, 39.

### 5.11. Manuscript Q

Because of its location in St. Petersburg, it has been impossible to examine this manuscript on site by the author. The study of the manuscript has been done using paper copies of the manuscript.

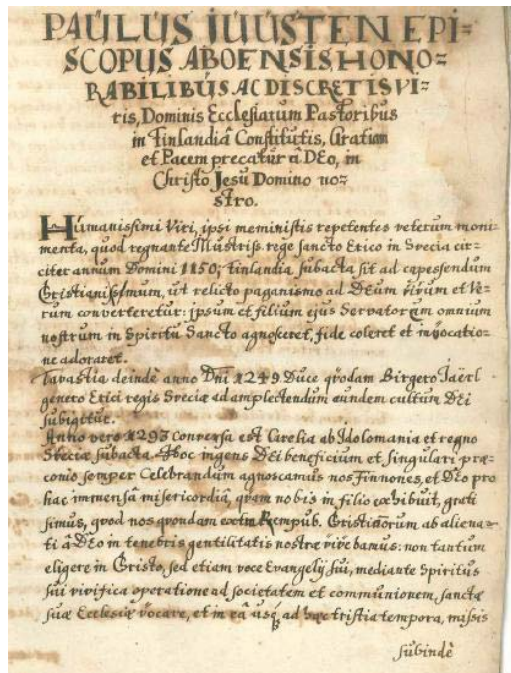
1. Location: St. Petersburg, The National Library of Russia. Ms. Lat.F.I.810, S. 18.
2. Content: *Incipit: Paulus Juusten Episcopus Aboensis Honorabilibus et discretis viris Dominis Ecclesiarum Pastoribus in Finlandia constitutis, gratiam et pacem precatur a Deo in Christo Jesu Domino nostro.*<sup>116</sup> *Explicit: 'inauguratur in Episcopum Aboensem Anno Domini 1583 Septemb. 8.'* Includes 28 bishops.
3. Codicological description. Not possible for this study.
4. Palaeographical remarks. Possibly 18<sup>th</sup> century style. No markings above *u*'s, very few abbreviations.
5. Other information: According to a marginal note on page one, it is a copy from Royal Archives.<sup>117</sup> The manuscript mentions the death of the 28<sup>th</sup> bishop in 1583 and cannot therefore be earlier than that.
6. Dating: *Terminus post quem* 1583.

---

<sup>116</sup> The manuscript has a marginal note on the first page: '*Ex Archivi Regi inscripto.*'

<sup>117</sup> '*Ex Archivi Rege inscripto*'. Ms Q 1r.

## 5.12. Manuscript R



1. Stockholm (Sweden), Riksantikvarieämbetet, Enheten för arkiv och bibliotek. Vitterhetsakademien och Riksantikvarien gemensamma handlingar 1786–1922. F16:14.
2. *Incipit: 'Biskops krönika I åbo. PAULUS JUUSTEN EPISCOPUS ABOENSIS HONORABILIBUS JUXTA AC DISCRETIS VIRIS' Explicit: 'inauguratur in episcopum aboensem anno domini 1583. September 8.'*
3. Codicological description:<sup>118</sup>
  - a. General. A quire of 14 folia.
  - b. Folio size: 21x16,5 cm
  - c. No pagination or foliation
  - d. Ink. Dark brown.
4. Palaeographical remarks. Seems to be written with a 17<sup>th</sup> century style. Letters are separated, *u*'s are marked.
5. Provenance and dating: The last year mentioned in the text is 1583. The text also includes the 27<sup>th</sup> and 28<sup>th</sup> bishops, and therefore cannot be written by Juusten. *Terminus post quem 1583.*

<sup>118</sup> Also only a digital copy of this manuscript was available for this study.

### 5.13. Manuscript S

1. Stockholm, Kungliga Biblioteket. Eng B.IX:1:46.
2. *Incipit: 'Paulus Juusten Episcopus Aboensis Honorabilibus et discretis viris Dominis Ecclesiarum pastoribus in Finlandia constitutes, gratiam et pacem precatur a Deo in Christo Jesu Domino nostro.' Explicit: 'Inauguratur in Episcopum Aboensem Anno domini 1583 Septemb. 8.'* Includes 27 bishops.
3. Codicological description.
  - a. General: Has covers and 48 pages of text.
  - b. Material: Rag paper (clear 8 wiremarks/page width 25 mm). Covers are made of thicker paper.
  - c. Stucture: 3 quires, all quaternios (16 pages.)
  - d. Folio size: bifolio 33 cm x 21 cm, folio c.16 cm x 21 cm pages.
  - e. Ruling: Visible lining 7 mm, letters 3 mm–7 mm.
  - f. Pagination/foliation: none.
  - g. Ink: dark brown with a hint of red.
  - h. Ex libris. On page 48/32 only. On the verso side of the cover, there is a ex libris of Engeström: '*Speravit infestis*'. Two phoenixes/eagles on both sides. A crowned cote of arms with four squares, two 'rings' on top-left and bottom-right, a belt with roses/stars going accross from bottom-left to top-right. Below the c-o-a locket of the seraphim order. On top two helmets, above the left one two feathers and a crowned bird (phoenix?) and on the right of the helmet a man (a Saracen?).
  - i. Watermark: round (diameter 9 cm), with a picture of something in the middle. Letters around it to be seen: - -A EVOBOIT? LIBRR - -
4. Palaeographical remarks. Style seems to be late 17<sup>th</sup> century or early 18<sup>th</sup> century. Some letters are connected. No markings above the letter *u*.
5. Provenance and dating: *Terminus post quem: 1583* (the last date mentioned in the text.)



## 5.14. Manuscript V

- 1) Stockholm, Kungliga Biblioteket.. A 915.
- 2) Content: *Incipit: Paulus Iuusten Episcopus Aboensis, Honorabilibus et discretis viris Dominis Ecclesiarum Pastoribus in Finlandia constitutis, gratiam et pacem precatur a Deo in Christo Jesu Domino nostro.* *Explicit: 'inauguratur in episcopum Aboensem Anno Domini 1583 Septemb. 8'.* Includes 27 bishops.
- 3) Codicological description
  - a. General: The first 2 pages are empty as well as 8 last ones.
  - b. Material: Lump paper (clear 8 VERTICAL wiremarks/page, lining 24mm).
  - c. Structure: 3 quires, first one a quaternio (16 pages); the second a bifolio (4 pages); 3rd one quinternio (20 pages). In total 40 pages.
  - d. Folio size: bifolio 41 cm x 31 cm, folio c.20 cm x 31 cm.
  - e. Ruling: no drawn lining, but *interlinea* about 10 mm, smallest letters 3 mm high.
  - f. Pagination/foliation: pagination from 635 to 652 starts from page 3 and ends on page 37. Also added pagination (by pencil) from 1 to 30 (pages 3–32)
  - g. Ink: dark brown/black.
  - h. No Ex Libris (or maybe, see below)
  - i. Watermarks. On page 1 writing: 'LEIIEBO' On a few pages 'PI' On most pages: a crown (?) with sharp triangles on it and on each triangle a little circle. On top of the crown tree combined circles at the end of a long stick. Something below the whole thing. Also on the back cover (inner side) a watermark/ex libris upside down with a mound surrounded by plants. Standing on a podium with the year 1898. Below the whole thing letters N I.
- 4) Palaeographical remarks. Style seems to be 17<sup>th</sup> century. Letters are separated, all *u*'s are marked with an accent above.
- 5) Provenance and dating: Has belonged to the series in KB *Virorum illustrium litterae*<sup>119</sup>. Has also belonged to the Kyrkohist. collection at the KB. According to Heininen<sup>120</sup>, dates from the end of 16<sup>th</sup> century.<sup>120</sup> *Terminus post quem: 1583* (the last date mentioned in the text.)

---

<sup>119</sup> Heininen 1988b.

<sup>120</sup> Heininen 1988a, 36.

### 5.15. Manuscript X

1. Uppsala universitetsbibliotek. E32 X 153
2. Contents: *Incipit: PAULUS JWSTEN Episcopus Aboensis, honorabilibus juxta ac discretis Viris Dominis Ecclesiarum Pastoribus*. *Explicit* 'Cecidit corona capitis nostri, ve nobis quia peccavimus' 26 bishops.
3. Codicological description
  - a. General: Has external hard, 19<sup>th</sup> century covers. The manuscript is part of a big collection, the whole collection includes 18 volumes.
    - i. The Chronicle belongs to the 17<sup>th</sup> 'Historiae episcoporum sacerdotumque Sveciae Gothiae ac Finlandiae.' It is marked in the catalogue as '(Liber VII) Finlandia. Paul Juusten Chronicon episcoporum.' However, from codicological perspective, it is not part of the other quires of part 17. It is, rather, part of the following part (part 18).
  - b. Material: Rag paper (clear 8 horizontal wiremarks/page, lining 24mm).
  - c. Binding: Several parts, all bound in a different way. The part of the chronicle seems to have the following structure: 1<sup>st</sup> quire is a senio (24 pages), 2<sup>nd</sup> and 3<sup>rd</sup> are quaternios. The 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> quires belong to the same binding, but are no longer part the chronicle. In total the whole collection is 474 pages.
  - d. Folio size: Folia c.16,5 cm x 20,7 cm.
  - e. Ruling: no drawn lining, but hight about 7 mm, smallest letters 2 mm high.
  - f. Pagination/foiation: pagination from 433 to 451 starts from page 1 (of the chronicle) and ends on page 39.
  - g. Ink: light brown. On the first page red ink in some words.
  - h. No Ex Libris.
  - i. Watermarks. Two different ones can be found in the chronicle. The Joker/Woman with a pointy hat. The other is the stick with 3 balls on it, and above that letters IV.
4. Palaeographical remarks. Possibly early 18<sup>th</sup> century Latin style. Some Swedish words are written in the German style. Uses *u* as a vowel and *v* as a consonant. In capital letters *V* and *W* are used for both, and in this case *U* or *UU* is marked

with a mark above it. Marks *ae* as *a'*. Abbreviations are not very common, mainly dni for *domini*.

5. Other information: According to Heininen, written in an early 18<sup>th</sup> century hand which is not, however, that of Rabenius.<sup>121</sup> Belonged to Nils Rabenius, who according to the catalogue died in 1717 as the vicar in Hedemora.<sup>122</sup> The last year mentioned in the manuscript is 1560.
6. Dating. *Terminus ante quem* 1560. *Terminus post quem* 1717.

---

<sup>121</sup> Heininen 1988a, 35.

<sup>122</sup> Handskriftkatalog X. Svensk Genealogi och Biografi, Svenskars Resor utom Sverige. Avskriften avslutad januari 1952, 25.

## 6. Editions and Translations of the Chronicle

### 6.1. Christian von Nettelblatt

Von Nettelblatt's edition was the first printed version of the chronicle, and it was published in 1728. This edition was based on one manuscript only, the so-called Codex Brenner, which was lost later on.<sup>123</sup> Because of the fact that von Nettelblatt used only one manuscript, he naturally did not create a *stemma* and did not deal with the different manuscripts at all. His edition is therefore more a transcription of one manuscript than a real edition. Therefore it is not relevant to discuss his edition or editorial principles in any more detail in this thesis. However, because of the very fact that his edition is only based upon one manuscript (which is unknown to us today) it is a very valuable source *per se*. It could even be considered as one 'extra' surviving manuscript, in particular because some of the other surviving manuscripts are also from the 18<sup>th</sup> century, making it possible (at least theoretically) that they are actually copies of von Nettelblatt's edition, not of some other manuscripts. Nettelblatt's edition's place in the *stemma* of Juusten's chronicle will be discussed later in this work. The very fact that his edition was only based upon one manuscript inspired G. H. Porthan to make a new edition, based on several manuscripts.

### 6.2. Henrik Gabriel Porthan

The second edition of Juusten's work was done by H. G. Porthan, generally considered as the founding father of Finnish historical studies<sup>124</sup>, who published the edition between 1784 and 1800.<sup>125</sup> Porthan named his edition *Chronicon Episcoporum Finlandensium*<sup>126</sup> (CEF) and this name has been adopted by some later scholars as well, as explained below.

Porthan's edition is much better than that of von Nettelblatt's because it is truly a critical edition, based on several, not only one manuscript, and it also has a critical apparatus below the main text where variant readings are given. However, Porthan did

---

<sup>123</sup> Porthan 1799, 1–2. von Nettelblatt 1728.

<sup>124</sup> Heininen 1988a, 27. Kajanto 1982, 131. Koskeniemi & Matinolli 1978, IX.

<sup>125</sup> Kajanto 1982, 130.

<sup>126</sup> 'Chronicle of Finnish Bishops'. Porthan 1799. Porthan 2005.

not create a *stemma* of the manuscripts, and did not really discuss their differences in detail either, except for some comments about Nettelbladt's edition's poor spelling of names.<sup>127</sup> Porthan used three text sources for his edition: Nettelbladt's edition (N), manuscript M and manuscript A, which is no longer available.<sup>128</sup> As Simo Heininen has calculated, Porthan mainly relied on manuscripts N (von Nettelbladt's edition) and M, placing the variant reading in A in the apparatus.<sup>129</sup>

Porthan's edition is also a rather late one, making it very unlikely that any of the manuscripts are its copies. Therefore it is not included in the *stemmata* created later. For the purposes of this study Porthan's work is mainly relevant in terms of some information he gives about von Nettelbladt's edition and manuscript A. Many also agree that in general Porthan's work's greatest value for later research is not the edition itself, but the information given in the *Notae editoris*.<sup>130</sup>

Porthan's edition was translated into Finnish by Herman Winter in 1956.<sup>131</sup> This translation was actually only a translation of the chronicle; Porthan's critical apparatus and editorial notes were not included in the translation. Winter added two pages of 'Explanations' in the end of the booklet. There he mentions Nettelbladt's edition and the other (then) known manuscripts: A, B, L, M, P, Q, S and V<sup>132</sup>. He also (correctly) remarks that the name of Juusten's chronicle was *Catalogus et Ordinaria Successio Episcoporum Finlandensium*, which Porthan renamed *Chronicon Episcoporum Finlandensium* in his edition.

---

<sup>127</sup> Porthan 1784, 1.

<sup>128</sup> It was apparently burnt in the Great Fire of Turku in the 19<sup>th</sup> century.

<sup>129</sup> Heininen 1988a, 30.

<sup>130</sup> Heininen 1988a, 27.

<sup>131</sup> Winter 1956.

<sup>132</sup> This means that Winter was already aware of the existence of Q, even though he actually only mentioned it as *Codex Petropolitanus*, not as ms Q. This is the same manuscript, nevertheless.

### 6.3. Wolfgang Schmidt

No new attempt to edit or to translate the chronicle was made after Porthan for over a hundred years. As late as in 1942 professor Wolfgang Schmidt made a Swedish translation of the chronicle, which was translated into Finnish a year later.<sup>133</sup> This translation was based on both the two previous editions of the text as well as on seven manuscripts, which Schmidt had at his disposal. He gives some information about the history of the manuscripts in the preface of the translation as well as in a separate article published in *Historisk Tidskrift för Finland*.<sup>134</sup> However, Schmidt made *only* a translation, not really an edition as he did not include the original Latin text at all but instead, rather interestingly, he made sort of a critical translation. This means that he did use footnotes for critical remarks and variant readings in other manuscripts, but he *translated* the variants as well, *without* mentioning the original reading. When Schmidt's translation was translated again into Finnish in 1943, these already once translated editorial comments in the footnotes were translated again, which naturally makes their critical use rather difficult.

Nevertheless, Schmidt was aware that some of the manuscripts had certain errors, which he identified, and divided the manuscripts into two main groups.<sup>135</sup> This grouping was later followed by Heininen.<sup>136</sup> Schmidt does not, however, back *his* arguments with any methods of textual criticism, *does* not refer to any methods or scholars, and only gives rather vague statements about some of the manuscripts being copies of other manuscripts. He does, however, give some lists of variants between the manuscripts when dividing them into groups, but focuses mainly on search for errors (and sometimes rather trivial spelling mistakes which have no use as *errores significativi*).<sup>137</sup> For example, he mentions as 'errors' the following differences in spelling certain place names and personal names: Ölandia–Olandia, Henning–Hemmingh, Justein–Juusten, Hinzichinus–Hinzechinus and many others, which have very little, or no significance at all from a stemmatological perspective.

---

<sup>133</sup> Schmidt 1942, Schmidt 1943a.

<sup>134</sup> Historiskt Tidskrift för Finland, 1943.

<sup>135</sup> Schmidt 1943b, 56.

<sup>136</sup> Schmidt 1943b, 56; Heininen 1988a; Heininen 1988b.

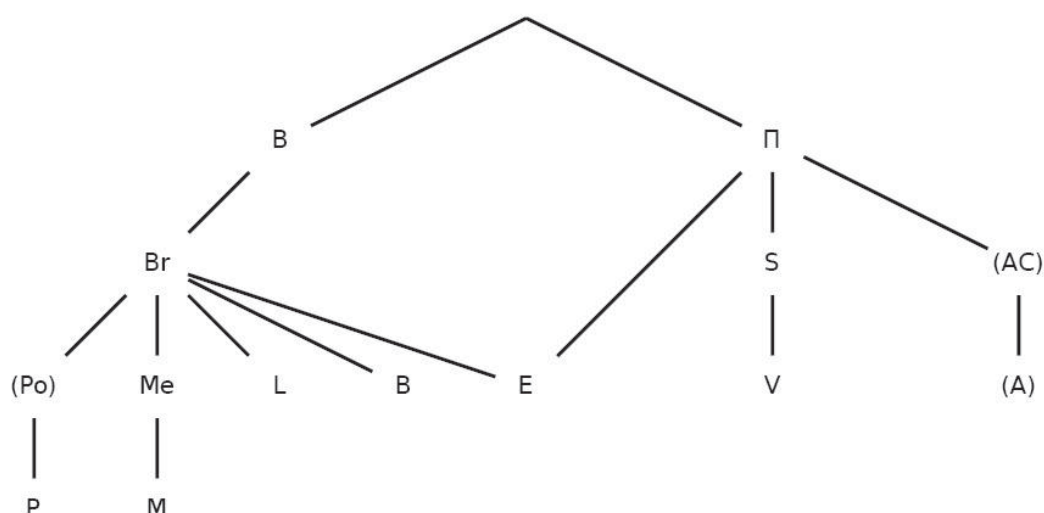
<sup>137</sup> Schmidt 1943, 44–59.

His translation received devastating criticism from another Finnish medievalist, Aarno Maliniemi, but for other reasons than lack of stemmatological methodology.<sup>138</sup> Errors in Schmidt's translation and his supposedly poor skills as a historian are, nevertheless, irrelevant for this study. What is relevant is Schmidt's vision of the history and *stemma* of the manuscripts. Even though Schmidt never published a *stemma* of the manuscripts, one can still create the following *stemma*, using the information given by him:

---

<sup>138</sup> Maliniemi 1943.

Figure 4



As one can see, some manuscripts which are known today are missing (D, G, Q, R, and X), and Schmidt was not aware of their existence. In Schmidt's view, mss L, B and E were all based upon a lost manuscript, known as Codex Brenner (Br). Schmidt placed P and M as part of the same main group (under the hyparchetype  $\beta$ ) and he suggested that they both had exemplars, which are also lost (manuscripts Po and Me). Under the other hyparchetype,  $\pi$ , he placed ms S and its copy, V, as well as the lost ms A, which he believed to be a copy of another lost manuscript, Ac. He also claimed that ms E should be placed between the two main groups, which in stemmatological terms would imply to a contamination between the groups. Schmidt's *stemma* will be analysed further in chapter 7 when creating the *stemma*.

Schmidt also tried to date the manuscripts, but to do this he only used the historical information available (mainly from Porthan) and not palaeographical, codicological, stemmatological or any other methods. He dated the manuscripts in the following way:

- Br was acquired by Elias Brenner (1647–1717) but its author is unknown.<sup>139</sup>
- Nettelbladt's edition was based upon Br.<sup>140</sup>
- Schmidt believed that ms B was a copy of Br made by Brenner himself in 1714 and bases this assumption on the note that can be found in ms B.<sup>141</sup>
- L was according to him made by Eric Benzeliuss in 1702.<sup>142</sup>

<sup>139</sup> Schmidt 1943b, 42–43.

<sup>140</sup> Schmidt 1943, 42–43.

<sup>141</sup> Schmidt 1943, 43.



- Schmidt dates E to the same period as B and L, ie. early 18<sup>th</sup> century.<sup>143</sup>
- Schmidt dated M to the mid-17<sup>th</sup> century. According to him, M has belonged to Jonas Mathiae Raumannus (died 1663) and is a copy of another, now lost, manuscript, Me.<sup>144</sup>
- P is dated to the 18<sup>th</sup> century by Schmidt.<sup>145</sup>
- V is according to him from the 17<sup>th</sup> century.<sup>146</sup>
- S is according to Schmidt from the 17<sup>th</sup> century.<sup>147</sup>

#### 6.4. Simo Heininen

In 1988 the story of Juusten's chronicle continued, when Professor Simo Heininen published both a Finnish translation and a critical edition of the chronicle in German. Heininen's critical edition was the first one in which the relations of the manuscripts were studied in detail, and also the first one to actually include a *stemma* of the manuscripts. Heininen included an introduction both to the edition and to the translation, in which he describes the history of the chronicle and the relations of the manuscripts. The history he describes is much more correct and more informative than the one given by Schmidt some 40 years earlier, but the relations of the manuscripts (even though he had discovered more manuscripts than Schmidt) is only partly satisfactory from a stemmatological perspective. It seems that Heininen was mainly interested in finding the best manuscript or an archetype for editorial purposes, and for this reason he ignored many of the manuscripts and did not really focus on the stemmatological aspects of the chronicle. In terms of stemmatology there also seems to be rather clear contradictions between the information given in the edition compared to the translation. These contradictions will be examined in detail below. This is necessary in order to get a clear picture of how Juusten's chronicle has been studied so far and to see in which way one can rely on the *stemma* presented by Heininen.

---

<sup>142</sup> Schmidt 1943, 43.

<sup>143</sup> Schmidt 1943, 43.

<sup>144</sup> Schmidt 1943, 48.

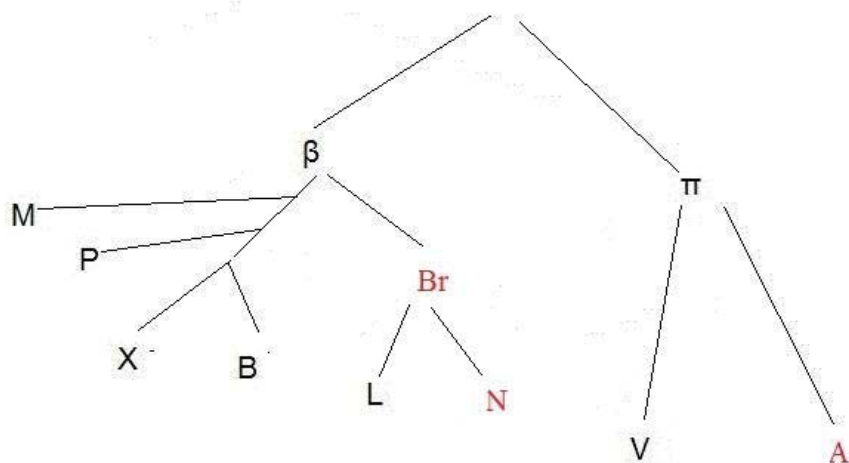
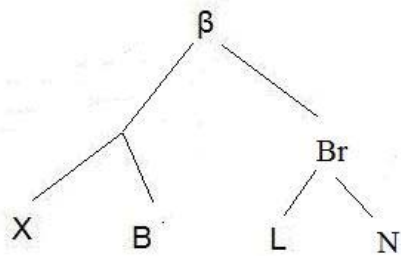
<sup>145</sup> Schmidt 1943, 49.

<sup>146</sup> Schmidt 1943, 51.

<sup>147</sup> Schmidt 1943, 51.

In his edition Heininen gives two different stemmata:<sup>148</sup>

Figures 5 and 6



As can be seen from these graphs, Heininen has two hyparchetypes in his *stemma*:  $\beta$  and  $\pi$ . Under  $\beta$  Heininen has placed manuscripts M, P, X and B. Also the lost manuscript Br is placed under it, as well as Nettelbladt's edition (N) and manuscript L. Heininen seems to have excluded from this *stemma* all those manuscripts, which are 'useless' from the point of view of traditional/Maasian textual criticism. He has thus removed manuscripts D and G (for being copies of L), and manuscript Q and S (which are copies of V.)<sup>149</sup> Also ms E is considered useless, because it is contaminated, and is not included in the *stemma*.<sup>150</sup>

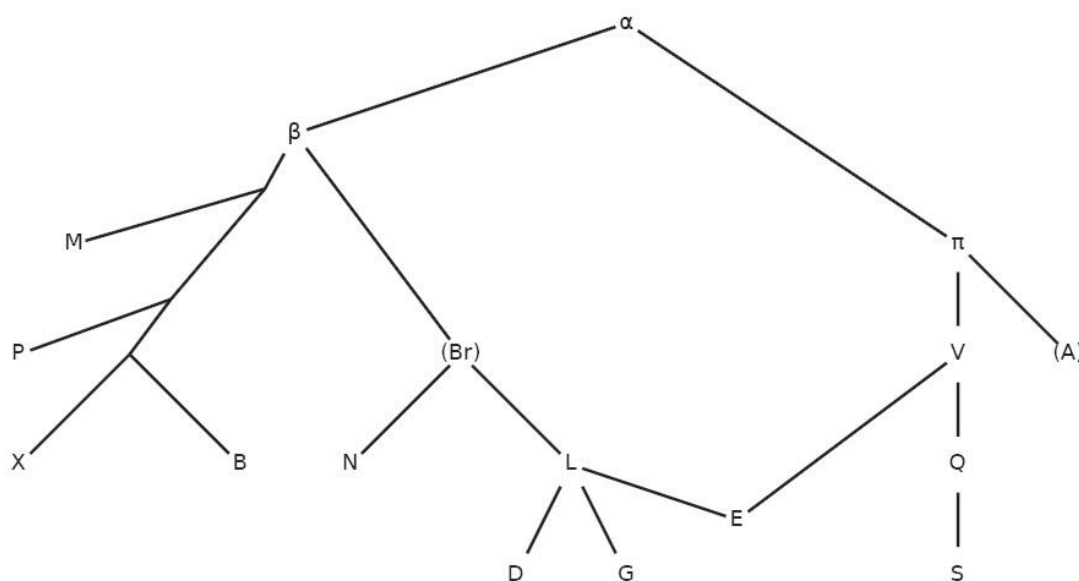
<sup>148</sup> Heininen 1988a, 42, 45.

<sup>149</sup> Heininen 1988a, 40.

<sup>150</sup> Heininen 1988a, 40.

These omissions of manuscripts from the *stemma* could possibly be considered as valid from the perspective of Maasian textual criticism, but not from the perspective of modern stemmatology or history, at least if one wants to test the *stemma*'s correctness. As this study is interested in the relations of *all* of the manuscripts, let us add the manuscripts D, G, W, S and E, which were removed by Heininen, into the *stemma* according to the information that he gives about their relations to the other manuscripts in his edition.<sup>151</sup> We have now created the following new *stemma*:

Figure 7



In this *stemma* one can find all of the manuscripts known to Heininen, also the lost ones (Codex Brenner (=Br) and manuscript A) as well as Nettelbladt's edition (N). According to Heininen, manuscripts D and G are copies of L, and they can thus be found in the *stemma* below L. Manuscript E is placed between manuscripts L and V, being a bad copy of manuscript L and corrected in some cases according to ms V.<sup>152</sup> Manuscripts Q and S are marked as descendants of V, as Heininen mentions.<sup>153</sup>

However, this is not the end of the information Heininen gives. He also mentions that he does not exclude the possibility that ms M and P belong under  $\pi$ , not  $\beta$ .<sup>154</sup> This is a rather surprising remark, as this would change the *stemma* completely! Unfortunately

<sup>151</sup> Heininen 1988a 39–46.

<sup>152</sup> Heininen 1988a, 40.

<sup>153</sup> Heininen 1988a, 36, 37.

<sup>154</sup> Heininen 1988a, 44–45.

Heininen does not explain this any further. Without any further use of methods of textual criticism, it is indeed hard, or impossible, to place M and P into the *stemma* and under the two main groups of  $\beta$  and  $\pi$ . If we ignore this problem, the *stemma* created by Heininen can be considered as much better than the one we created earlier according to the information given by Schmidt.

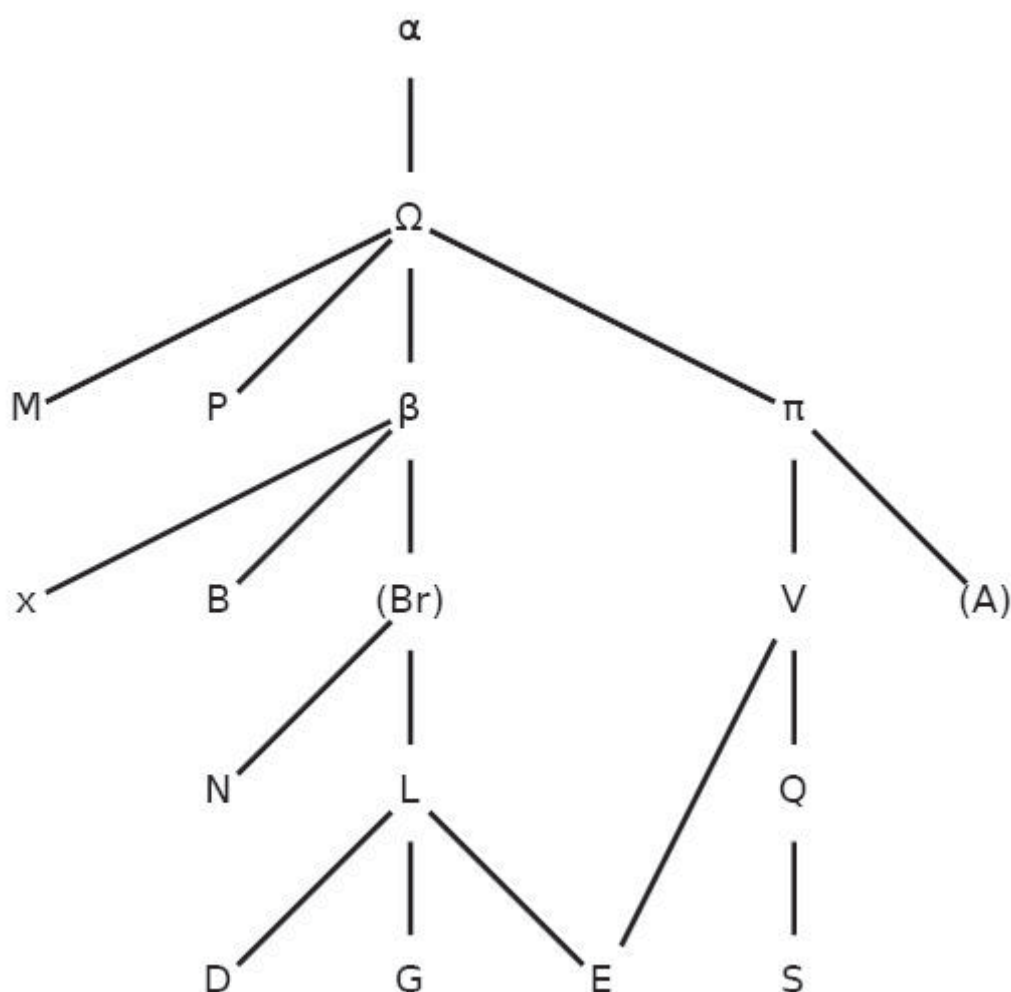
However, Heininen's *stemma* has even further problems and paradoxes. On page 48 of the edition he actually has introduced a third archetype,  $\Omega$ , and mentions that  $\Omega = \beta MP \pi$ .<sup>155</sup> He also gives a further explanation:  $\beta = \text{LNBX}$  and  $\pi = \text{VA}$ .<sup>156</sup> These explanations seem totally out of place: Hyparchetypes  $\beta$  and  $\pi$  now lose their position as hyparchetypes, and manuscripts M and P are suddenly *closer* to the supposed original than  $\beta$  and  $\pi$ ! According to this information, the *stemma* would be the following:

---

<sup>155</sup> Heininen 1988a, 48

<sup>156</sup> Heininen 1988a, 45, 48.

Figure 8



In the introduction of the Finnish translation Heininen also gives some information concerning the relations of the manuscripts. This information is much less informative than the one given in the edition, but it still seems to be in contradiction with the edition. There is a problem concerning manuscripts M and P in particular. As explained before, according to the information given in Heininen's edition, they can be placed into the *stemma* in three different ways:

- They are branches from archetype  $\beta$  (meaning copies of  $\beta$  or copies of copies of  $\beta$ ). (See figure 7.)
- They are branches of the archetype  $\pi$ . (the possibility that Heininen did not want to exclude, mentioned above.)
- They are copies of archetype  $\Omega$ , just like  $\beta$  and  $\pi$  (figure 8).

As peculiar as it is, according to the introduction of Heininen's translation, M and P are placed into the *stemma* according to *none* of the following three options! Instead, they are '- - based upon a lost version of the chronicle, which has been close to the codex of Brenner, but worse than it.'<sup>157</sup> In addition to this Heininen mentions that M and P belong to neither of the two *main* branches (under  $\beta$  and  $\pi$ ), and so we should add a whole new, third, branch (and archetype) in the *stemma*!

Also, Heininen mentions in the edition that E is a copy of L, but has been contaminated with V.<sup>158</sup> In his translation, however, Heininen says that 'The copy of the Royal Library of Stockholm, E, represents a very poor copy of the Brenner tradition; several corrections have later been made into it according to ms V.'<sup>159</sup> Thus E could be placed between the Brenner codex and V, unlike in the *stemma* made according to the information given in Heininen's edition. The *stemma* based on the information given only in the translation would look like this:

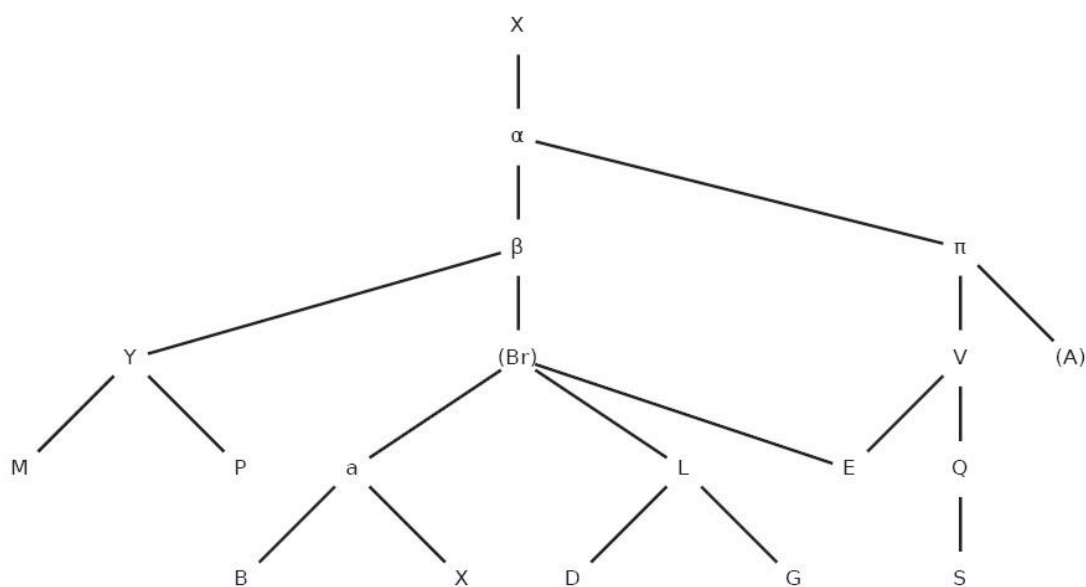
---

<sup>157</sup> Heininen 1988b, 31. '- - ne pohjautuvat sittemmin kadonneeseen kronikan versioon, joka on ollut lähellä Brennerin koodeksia, mutta joka on ollut tätä huonompi.' English translation by MH.

<sup>158</sup> Heininen 1988a, 40.

<sup>159</sup> Heininen 1988b, 31. 'Tukholman kuninkaallisen kirjaston käsikirjoitus E edustaa varsin huonoa kopiota Brennerin traditiosta; siihen on myöhemmällä kädellä tehty useita korjauksia käsikirjoituksen V mukaan.'

Figure 9



In this *stemma* one can see the new supposed ancestor of M and P, γ, and mss M and P under it, as well as ms E placed between Br and V. Differences between this and the stemmata given earlier are quite extraordinary.

It should also be noted that in some cases Heininen's edition uses a variant which cannot be found in *any* of the manuscripts of the *stemma*.

- 'praebendati', exists only in Ec, Eo and Q.
- 'provenientes' is in none of the manuscripts.
- 'parentalae' can only be found in Ec, Eo and R.

In spite of being the most academic and theoretical study of Juusten's text, Heininen's edition and translation can be seriously questioned from a stemmatological perspective. A closer look at Heininen's *stemma* will be taken in chapter 7, when creating the *stemma*. More comparison and suggestions to change the *stemma* will also be presented then.

## 7. *Stemma* using non-computer-assisted methods

In this chapter a *stemma* of the tradition of Juusten's work is created using the traditional, i.e., non-computer-assisted, methods. This *stemma* will later, in chapter 8, be compared to the different computer-assisted *stemmata*. The analysis is not based on the entire chronicle, but only on a part of the text: the prologue and the following bishops: 17<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup>, 27<sup>th</sup> and 28<sup>th</sup>. These texts are together about 2 600 words long, and they thus give us enough evidence for having a preliminary stemmatological analysis of the manuscripts. This can be argued to be a long enough excerpt, as it is very unlikely that in terms of variants the situation will change dramatically if we include more parts. In terms of separative errors, one can already find enough of them in these texts to prove the case for many copy-exemplar relations. Even if there were more of separative errors in the other manuscripts, these would only give us more examples. In the case where separative errors are missing between certain manuscripts, it would be very unlikely to find really significant separative errors in some other parts of the text, if there were none in these 2600 words. A copyist, who made *no* separative mistakes in 2 600 words and then suddenly started to make them, would be a very unlikely one. It is also very important to mention that these texts are all from different parts of the chronicle: the prologue is from the beginning, the 17<sup>th</sup> bishop in the middle (and this is also the longest of the bishop texts) and the 25<sup>th</sup>, 26<sup>th</sup>, 27<sup>th</sup> and 28<sup>th</sup> bishops form the end of the chronicle. Comparisons will be made, in particular, to Heininen's edition and translation, since these are the only ones with real stemmatological information. Where relevant, also comparisons to Schmidt's works are made. In this study *all* manuscripts are taken into account, unlike in Heininen's edition in 1988.

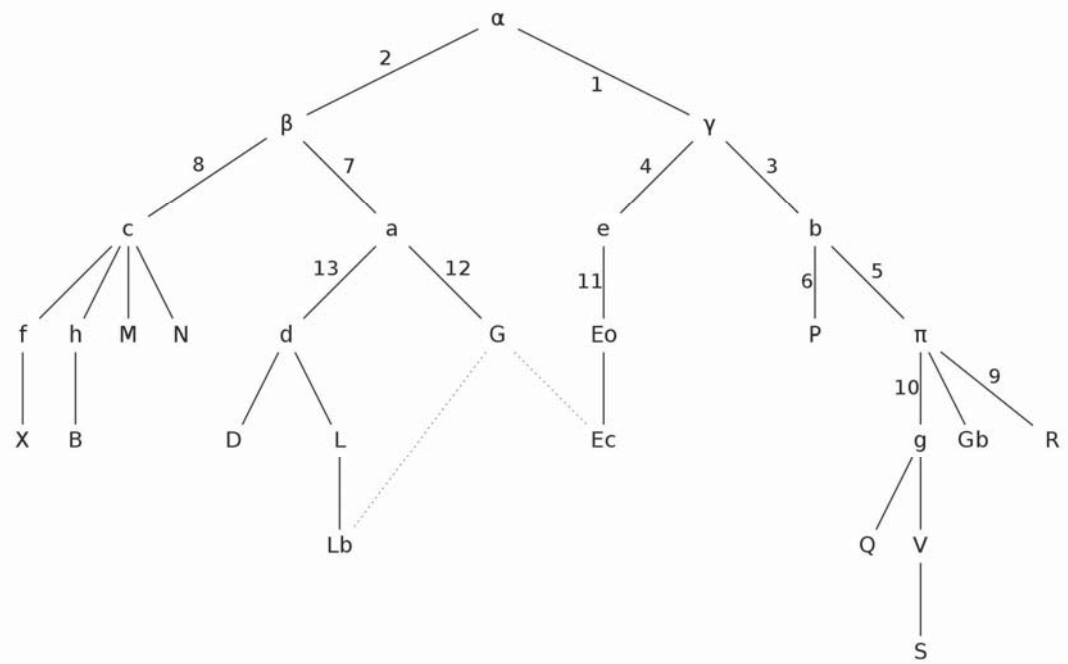
In the *stemma codicum* below numbers have been used to identify the variants according to which the branch is created. Numbers refer to the variants or *errores significativi*, which are in the table<sup>160</sup> below the *stemma*. The table only includes the most important variants, not each and every one of them. The variants in the table will be analysed in detail in the chapters below.

---

<sup>160</sup> In the table the location of the variant is also given. [Prologue (=P), 17<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup>, 27<sup>th</sup> or 28<sup>th</sup> bishop.]



Figure 10



No	Significant variants	Manuscripts with the variant	Comments
1	omitted <i>licet invite [25<sup>th</sup>]</i> <i>recordationis</i> not <i>memoriae [25<sup>th</sup>]</i> <i>translati sunt psalmi</i> not <i>translatum est [25<sup>th</sup>]</i>	Eo, Ec, Q, R, S, V	Gb and P do not include the 25 <sup>th</sup> bishop, but it still seems likely that they belong to this group (see below)
2	kept <i>licet invite [25<sup>th</sup>]</i> <i>memoriae</i> not <i>recordationis [25<sup>th</sup>]</i> <i>translatum est</i> not <i>translati sunt psalmi [25<sup>th</sup>]</i>	B, D, G, L, M, N, X	Possibly ‘original reading’
3	<i>dicitur erexisse</i> not <i>dicitur quod erexit [17<sup>th</sup>]</i>	P, Gb, Q, R, S, V	This variant seems to place P under this branch.
4	<i>dicitur quod erexit</i> not <i>dicitur erexisse [17<sup>th</sup>]</i>	B, D, Ec, Eo, G, L, M, N, X	Possibly ‘original reading’
5	Omission of <i>competentibus [17<sup>th</sup>]</i> <i>juxta ac</i> not <i>et [P]</i> <i>precatur a deo</i> not <i>a deo precatur [P]</i> 1249 not 1248 [P] <i>regno subacta sveciae</i> not <i>regno sveciae subacta [P]</i> <i>eligere in christo</i> not <i>in christo eligere [P]</i> omitted <i>et post hanc vitam apud eum in aeternum vivat [P]</i> <i>cancellarius regis erici</i> not <i>cancellarius erici regis [17<sup>th</sup>]</i> <i>in reditu</i> not <i>in reditu suo [17<sup>th</sup>]</i> <i>aboensi ecclesia fundavit</i> not <i>ecclesia fundavit aboensi [17<sup>th</sup>]</i> omitted <i>superfecit et ipsum altare [17<sup>th</sup>]</i> <i>vespertinas</i> not <i>vesperas [17<sup>th</sup>]</i> <i>curavit</i> not <i>curati [17<sup>th</sup>]</i> <i>probabiles</i> not <i>rationabiles [17<sup>th</sup>]</i> omitted <i>suum [17<sup>th</sup>]</i> <i>ut</i> not <i>quod [17<sup>th</sup>]</i> <i>ornatur argento</i> not <i>argento ornantur [17<sup>th</sup>]</i> <i>regii tributi</i> not <i>tributi regii [17<sup>th</sup>]</i> <i>finlandico</i> not <i>finlandensi [17<sup>th</sup>]</i> <i>sunt reperti similes</i> not <i>reperti sunt similes [17<sup>th</sup>]</i> omitted <i>mensis [17<sup>th</sup>]</i> <i>instuendo in</i> not <i>in instuendo [25<sup>th</sup>]</i> omitted <i>ad (ad abo) [25<sup>th</sup>]</i> omitted <i>in (in visitatione) [25<sup>th</sup>]</i> <i>ut</i> not <i>quod [25<sup>th</sup>]</i> 1548 not 48 [25 <sup>th</sup> ] <i>rector scholae</i> not <i>magister [25<sup>th</sup>]</i> omitted 2. [25 <sup>th</sup> ] omitted <i>alter [25<sup>th</sup>]</i> omission of the long version of the 27 <sup>th</sup> bishop introduction of the short version of the 27 <sup>th</sup> bishop introduction of the 28 <sup>th</sup> bishop	Q, R, S, V	Not in Q  Also Eo, Ec  70
6	The same as above, but vice versa	B, D, G, Ec, Eo, L, M, N, P, X	‘original reading’

7	<i>'christianissimum'</i> against <i>'christianismum'</i> [P] <i>'pro hac'</i> against <i>'pro hac immensa'</i> [P] <i>'finlandiae'</i> against <i>'finlandicae'</i> [P] <i>'modo'</i> against <i>'tantum'</i> [17th] <i>'de töfsalo'</i> against <i>'ad töfsalo'</i> [17th] <i>'et praecipuus'</i> against <i>'ac praecipuus'</i> [17th] <i>'erexit'</i> against <i>'extitit'</i> [17th] <i>'capitulum'</i> (also N) against <i>'capitaneum'</i> [17th]	D, L, G, N	Contaminati on in N
8	the same but vice versa also the omission of the 27 <sup>th</sup> bishop	B, X, M	
9	<i>ac</i> not <i>et</i> [P] added <i>nomine</i> [17th] <i>praedecessores</i> not <i>antecessores</i> [17th] <i>hyemali</i> not <i>hyematur</i> [17th] <i>sibi</i> not <i>illi</i> [17th] <i>suus</i> not <i>ejus</i> [17th] <i>abo</i> not <i>aboae</i> [17th] <i>poenitendam</i> not <i>poenitendum</i> [25th]	R	
10	the same but vice versa	Q, S, V, Gb	
11	omitted <i>in tenebris gentilitatis nostrae vivebamus</i> [P] omitted <i>inchoando usque ad summam missam terminando statuit</i> [17th] omitted <i>inter optimates et regni consiliarios velut alter joseph, magnus et re et nomine per tria regna aquilonaria reputatur. hic</i> [17th] omitted <i>praesente archiepiscopo et multis aliis</i> [25th]	Eo, Ec	
12	kept long version of the 27 <sup>th</sup> bishop	G	
13	omitted the 27 <sup>th</sup> bishop	L, D	

In this *stemma* Latin upper-case letters refer to the survived manuscripts, Latin lower-case manuscripts refer to hypothetical lost manuscripts and Greek letters to hyparchetypes and archetype. It should be pointed out, that the hypothetical manuscripts are indeed only hypothetical and are placed to the *stemma* simply in order to point out that most likely many manuscripts are missing, and therefore there are possibly ancestral manuscripts above each manuscript in the *stemma*. As one can see, this *stemma* has two main branches (under hyparchetypes  $\beta$  and  $\gamma^{161}$ ). The one on the left (under  $\beta$ ) also has two sub-branches: the first under hypothetical lost manuscript 'c' (including mss B, M, N and X) and the second under the lost manuscript 'a' (=Br?) (including mss D, G, L and Lb.) Also the branch under hyparchetype  $\gamma$  has two sub-branches: e (Eo and Ec's ancestor) and  $\pi$  (ancestor of Gb, Q, R, S and V.)

It should be immediately noticed, that although the *stemma* has two hyparchetypes and two main branches, mentally one should actually divide the *stemma* in a different way. The two hyparchetypes and their branches are in a way illusionary, in reality the manuscripts form two main groups: the first one is under  $\pi$  (Gb, Q, R, S, V) and the second one consists of all the others. This can be clearly seen when looking at the table above: although some variants clearly divide the *stemma* into several branches already right after the archetype (splits 1–4), it is actually split 5 where the big changes occur. As one can see, the list of variants in split 5 is much longer than in any other splits. Therefore one must not fall into the visual illusion the *stemma* gives with its branches: in reality there is a great distance between b and  $\pi$ ! Nevertheless, this *stemma* represents the evolution of the text and must be seen as a correct one. The misleading visual illusion has been corrected slightly by making the branches different in terms of length. It should be noticed, however, the length of branches is not based on any mathematical distance calculations based on the differences of the texts: it is merely a much simplified way of making the *stemma* look closer to reality

As one can see, some contamination is also marked in this *stemma*. Contamination has been, and still is, a major problem in stemmatology, as was already mentioned above. In this work this problem also needs to be dealt with, as one of the most important ways of placing a manuscript into the *stemma* are the separative errors the manuscripts have. It could be argued that an omission which counts as a separative error, for instance, could

---

<sup>161</sup> The Greek letter  $\gamma$  is used here instead of  $\pi$  (like Heininen did in 1988) simply for the sake of the common order of Greek letters. If we have  $\alpha$  (the archetype) then the next two are logically  $\beta$  and  $\gamma$ , not  $\pi$ .

be reconstructed by a scribe because of contamination: the scribe notices that something is missing, checks the reading from another manuscript and the problem is solved. In this case it would seem that it would be wrong to think that a scribe could not reconstruct the omission. However, if this was the case, it would be very likely that the scribe would *always* check when something was clearly missing and not only in some occasions. Also, in the case of the manuscripts for Juusten's chronicle, it seems quite clear that the manuscripts either have or have not made certain omissions. There seems to be no trace of contamination when it comes to omissions which are considered separative errors.

The only contamination the *stemma* has seems to be more about adding an extra part into the text from another manuscript (in the case of G/Lb/E). It seems clear that G (or its ancestor) has been at the disposal of the author of Lb and Ec. This would explain how the 27<sup>th</sup> bishop was added to manuscript L (creating Lb) and how E was corrected (thus creating Eo and Ec). The variant N has (*capitulum*) looks a bit like a contamination, and it most likely would be one, did one not take into account the fact that N is actually an edition (even though an early one.) It seems quite likely that von Nettelbladt simply noticed that *capitaneum* is a wrong word and figured out that *capitulum* must be the correct one, without actually checking this from another manuscript. This is a very special case and most likely would not apply to the other manuscripts, as one can quite safely assume that they are mainly copies, not really editions which will be printed and published. Let us now analyse each branch in detail.

## 7.1. The group GbQRSV under hyparchetype $\gamma$

Let us start with the five manuscripts under  $\pi$ , as these five form a very unique group compared to the other manuscripts under the other hyparchetype and even compared to the manuscripts under  $\gamma$ . The basis of comparison will be, as mentioned, Heininen's edition and translation, and his (controversial) *stemma* and information concerning the relationship of the manuscripts given in the edition and in the translation.<sup>162</sup> Where relevant, comparison to Schmidt's edition will also be made. Both Heininen and Schmidt argued that the manuscripts can be divided into two main groups ( $\beta$  and  $\pi$  in Heininen's edition,). When dividing the manuscripts into two main groups (see his *stemma* above in chapter 6.3.), Schmidt listed the main differences the main groups have. He included in the listing both actually important variants (eg. significant changes in grammar, clear changes of style and omissions.) and basically useless differences in spelling (place names and personal names in particular). This division can be seen as rather correct one, even though Schmidt did not have a very well backed up argument for it.<sup>163</sup>

Heininen also demonstrated this in the *stemma* he included in his edition.<sup>164</sup> This argument can be seen as a good one, considering the variants these two branches share. In the material analysed, one can very clearly see how the mss Q, S and V share variants together, forming one group, while the other manuscripts, B, D, Eo, Ec, G, L, M, N, P and X form another. Heininen and Schmidt were unaware of the existence of ms R, and this can be seen as belonging to the same branch as Q, S and V. Also ms Gb belongs to this branch because its version of the 27<sup>th</sup> and 28<sup>th</sup> bishop is very similar to that of manuscripts Q, R, S and V. However, as Gb only includes these two bishops, it is a rather special case compared to the other manuscripts, and cannot be written by Juusten himself, as explained above in chapter 5.

Below is a list of the variants according to which this division into the two main branches can be constituted. Most obviously irrelevant variants are not included in the list (different ways of spelling a name etc.) and doubtful variants and other extra

---

<sup>162</sup> Heininen 1988a, 1988b.

<sup>163</sup> Schmidt 1943, 51–54.

<sup>164</sup> Heininen 1988a, 45. Schmidt 1943b, 56.

information is mentioned in the ‘Comments’ column. Also those variants, which count as *errores separativi*, are mentioned in the comments.

Table 2

No.	Loc.	Other mss (Lb only in the 27 <sup>th</sup> bishop)	QRSV (and Gb in the 27 <sup>th</sup> and 28 <sup>th</sup> bishops)	Comments
1	Prol.	<i>honorabilis juxta ac</i>	<i>honorabilis et</i>	Also ms R has omitted the word ‘ <i>juxta</i> ’, but has kept ‘ <i>ac</i> ’ instead of ‘ <i>et</i> ’.
2	Prol.	<i>a deo precatur in Christo</i>	<i>precatur a deo in Chisto</i>	Ms R has also the word ‘ <i>nomine</i> ’ before ‘ <i>Christo</i> ’
3	Prol.	1248	1249	
4	Prol.	<i>regno subacta sveciae</i>	<i>regno sveciae subacta</i> <sup>165</sup>	
5	Prol.	<i>in christo eligere</i>	<i>eligere in christo</i>	
6	Prol.	<i>et post hanc vitam apud eum in aeternum vivat</i>	Omitted	This omission also counts as an <i>error separativus</i> <sup>166</sup>
7	Prol.	<i>fore</i>	<i>fere</i>	
8	Prol.	<i>predecessores</i>	<i>antecessores</i>	This same variant occurs twice in the prologue, but in both cases ms R has ‘ <i>predecessores</i> ’
9	17 <sup>th</sup>	<i>cancellarius erici regis</i>	<i>cancellarius regis erici</i>	
10	17 <sup>th</sup>	<i>in reditu suo</i>	<i>in reditu</i>	
11	17 <sup>th</sup>	<i>parisiis hyemali</i> <sup>167</sup>	<i>hyematur</i>	R has <i>hyemali</i> , which could indicate that it is higher in the <i>stemma</i> than QSV. For QSV, this also counts as an <i>error separativus</i> , as the weird form ‘ <i>hyemali</i> ’ would be quite impossible to reconstruct. <sup>168</sup>
12	17 <sup>th</sup>	<i>sibi</i>	<i>illi</i>	R has <i>sibi</i>
13	17 <sup>th</sup>	<i>ecclesia fundavit aboensi</i>	<i>aboensi ecclesia fundavit</i>	

<sup>165</sup> Also ms E is very close: ‘*regno sveciae subjecta*’.

<sup>166</sup> It would have been very difficult to reconstruct this correctly when copying from Q, R, S or V.

<sup>167</sup> *hyemale* B, *hyemavit* N.

<sup>168</sup> The entire phrase says in QSV: *Hic in reditu parisiis hyemali* (=He wintered in Paris on his way back). The correct way of saying this in Latin would be *parisiis hyemavit* (=He wintered in Paris), which is also how ms N has corrected it. The other manuscripts have changed the verb into passive voice: *parisiis hyematur* (=He is wintered in Paris), which is technically incorrect, but understandable. The one QSV uses has used the adjective *hyemalis* in its ablative case, *hyemali*, trying to create (poorly) an *ablativus absolutus*–structure. When copying from a ms which has *hyematur* (or *hyemavit*), it would be very original to come up with *hyemali*.

14	17 <sup>th</sup>	<i>superfecit et ipsum altare</i>	-	A clear <i>error separativus</i>
15	17 <sup>th</sup>	<i>vesperas</i>	<i>vespertinas</i>	
16	17 <sup>th</sup>	<i>suus</i>	<i>ejus</i>	R <i>suus</i>
17	17 <sup>th</sup>	<i>chorales abo</i>	<i>chorales aboae</i>	R <i>abo</i>
18	17 <sup>th</sup>	<i>dicitur quod<sup>169</sup> — erexit</i>	<i>dicitur erexisse</i>	also ms P
19	17 <sup>th</sup>	<i>eas competentibus dotavit</i>	<i>eas dotavit</i>	<i>error separativus</i>
20	17 <sup>th</sup>	<i>sacristiam summum chorum</i>	<i>sacristiam ibidem summum chorum</i>	
21	17 <sup>th</sup>	<i>speciales proventus curati</i>	<i>speciales proventus curavit</i>	ms M <i>curari</i> , Eo <i>curaria</i>
22	17 <sup>th</sup>	<i>rationabiles causas</i>	<i>probabiles causas</i>	
23	17 <sup>th</sup>	<i>et suum</i>	<i>et</i>	
24	17 <sup>th</sup>	<i>ita quod nulla</i>	<i>ita ut nulla</i>	
25	17 <sup>th</sup>	<i>argento ornantur</i>	<i>ornatur argento</i>	NB both the change of word order and the change from plural to singular
26	17 <sup>th</sup>	<i>tributii regii</i>	<i>regii tributii</i>	
27	17 <sup>th</sup>	<i>populo finlandensi</i>	<i>populo finlandico</i>	
28	17 <sup>th</sup>	<i>reperi sunt similes</i>	<i>sunt reperi similes</i>	
29	17 <sup>th</sup>	<i>die 9 mensis martii</i>	<i>die 9 martii</i>	
30	25 <sup>th</sup>	<i>villagio</i>	<i>villa</i>	also Eo, Ec
31	25 <sup>th</sup>	<i>in instuendo</i>	<i>instuendo in</i>	
32	25 <sup>th</sup>	<i>advenientem ad abo</i>	<i>advenientem abo</i>	
33	25 <sup>th</sup>	<i>quam in visitatione</i>	<i>quam visitatione</i>	
34	25 <sup>th</sup>	<i>adeo quod multis</i>	<i>adeo ut multis</i>	also N
35	25 <sup>th</sup>	<i>poenitendam</i>	<i>poenitendum</i>	Not R
36	25 <sup>th</sup>	<i>utiliter</i>	<i>fideliter</i>	V <i>fideliter</i>
37	25 <sup>th</sup>	<i>in omnium finnonum</i>	<i>in finnonum</i>	Also Eo and Ec
38	25 <sup>th</sup>	<i>anno 48</i>	<i>anno 1548</i>	
39	25 <sup>th</sup>	<i>licet invite</i>	-	Also mss Eo and Ec, counts as an <i>error separativus</i>
40	25 <sup>th</sup>	<i>memoriae</i>	<i>recordationis</i>	Also mss Eo and Ec

<sup>169</sup> Ms B has 'quoque', but except for this error the structure is the same.



41	25 <sup>th</sup>	<i>translatum est</i>	<i>translati sunt psalmi</i>	Also mss Eo and Ec
42	25 <sup>th</sup>	<i>in qua conditione fuerit et quid fecerit</i>	<i>in qua conditione et quid fecerit</i>	Also mss Eo and Ec, <i>error separativus</i>
43	25 <sup>th</sup>	<i>magister</i>	<i>rector scholae</i>	
44	25 <sup>th</sup>	<i>disjunctio</i>	<i>distinctio</i>	Also mss Eo and Ec, but not V
45	25 <sup>th</sup>	<i>2. adventus</i>	<i>adventus</i>	
46	26 <sup>th</sup>	<i>possint</i>	<i>possent</i>	<i>possunt</i> N
47	26 <sup>th</sup>	<i>alter alterius lavemus pedes</i>	<i>alterius lavemus pedes</i>	This omission is a very clear conjunctive error, in particular because it is a biblical phrase <sup>170</sup>
48	27 <sup>th</sup>	A long version of the 27 <sup>th</sup> bishop	A short version Gb, Q, R, S and V	This counts as an <i>error separativus</i> . It would be impossible to make up the longer version of the 27 <sup>th</sup> bishop, if copying from Gb, Q, R, S or V.
49	28 <sup>th</sup>	Omitted	A short text Gb, Q, R, S and V	Also a <i>error separativus</i>

With these variants one can quite surely argue that mss Q, R, S and V very likely belong together against the other manuscripts, B, D, Eo, Ec, G, L, M, N, P, and X. However, in order to make sure that *none* of these four manuscripts is the copy or exemplar of any of the other manuscripts in the other main branch, one needs to find *errores separativi* in all of these four manuscripts against all the other manuscripts and also *errores separativi* in all of the other manuscripts against Q, R, S and V.

As one can see in the table above, some variants also count as *errores separativus*: these are numbers 6, 11, 14, 19, 39, 42, 48 and 49. Of these eight variants numbers 6, 14, 19, 39, 42 quite clearly demonstrate that Q, R, S and V cannot be the ancestors of the other manuscripts, because they include such omissions, which would have been impossible to reconstruct correctly. Similarly variants 11, 48 and 49 indicate that QRSV are not copied from the other manuscripts, as their omissions and alterations would have been impossible to reconstruct correctly.

---

<sup>170</sup> Vulgate, Io. 13:14: ‘*si ergo ego lavi vestros pedes Dominus et magister et vos debetis alter alterius lavare pedes.*’

The 49 variants above and the eight *errores separativi* among them in QRSV against the rest, that is, BDEcEoLMNPX, are more than enough to show that mss QRSV clearly belong to a different group, or branch of the *stemma*, marked under the hyparchetype  $\pi$ . This same grouping was already established by both Schmidt and Heininen, but without manuscript R (and Gb) and without using *errores separativi*. Two different main groups, under  $\pi$  and  $\beta$  have now been identified. Let us now look more into detail the relationships of the manuscripts and their order within the branch.

### 7.1.1. Manuscripts S and V in the *stemma*

Schmidt argued that ms S is a copy of V.<sup>171</sup> This was followed by Heininen, who agreed with Schmidt, and also placed ms Q (which was an unknown manuscript to Schmidt) between V and S.<sup>172</sup> For this study two new manuscripts of the branch have been discovered: R and the short Gb. Let us start by placing manuscripts S and V first and then move on to include Q, R and Gb.

First of all, it must be noticed that there are no *errores separativi* in S or V against each other. This means that either of them *can* be the copy or exemplar of the other. Neither Schmidt nor Heininen, however, mentions this when they placed V above S. They are both correct when saying that S can indeed be the copy of V (and vice-versa). The difficult part is to explain *why* V is higher (ie. closer to the *archetype*) in the *stemma* than S, which is explained below.

Schmidt did not use Maasian methods, but claimed that S is a copy of V and based this upon two main arguments. Firstly, he claimed that the variants V uses for certain place names and personal names are older forms than the ones found in S:

Table 3

V	S
<i>Kwsto</i>	<i>Kusto/Custo</i>
<i>Vestfaall</i>	<i>Vestfaal</i>
<i>Nyttegårdh</i>	<i>Nyttegård</i>
<i>Wemo</i>	<i>Vemo</i>
<i>Olaø</i>	<i>Olavo</i>
<i>Flämingh</i>	<i>Flemingh</i>
<i>Gostavus</i>	<i>Gustavus</i>

This can indeed be the case, but it is very hard to prove this, in particular as spelling changed at a different pace in different regions, and Schmidt himself argued that both V

<sup>171</sup> Schmidt 1943b, 55.

<sup>172</sup> Heininen 1988a; Heininen 1988b.

and S are from the 17<sup>th</sup> century, but he did not mention how he dated the manuscripts.<sup>173</sup> If they are both (supposedly) from the same century, how come changes in spelling of names could be seen as a relevant indicator for their order in the *stemma*?

He also mentions that S has made some small errors which V did not make: *monetum* (vs. *monetam* in V), *exortus* (*exortas*) and *procuranto* (*procurante*).<sup>174</sup> This argument is a better one, indeed S seems to have made here three mistakes when copying. However, it is a wrong approach to search for ‘errors’ here, because we do not know which manuscript is ‘correct’. It is more productive to compare the variants S and V have, and see which one is closer to the other manuscripts, and therefore also higher in the *stemma*. Below is a list of readings in V and S to show what differences they have in the material analysed for this study:

Table 4

Loc.	V	S	Comments
Prol	<i>ipsi</i>	<i>qui</i>	all the other mss have <i>ipsi</i>
Prol.	<i>consolationi</i>	<i>consolationes</i>	also Q (and Ec consolationis)
Prol.	<i>monumenta</i>	<i>monimenta</i>	Ec, Eo, V, X
17 <sup>th</sup>	<i>ipsum</i>	<i>ipsam</i>	all the other <i>ipsum</i>
17 <sup>th</sup>	<i>dotatio</i>	<i>donatio</i>	all the other <i>dotatio</i>
17 <sup>th</sup>	<i>monetam</i>	<i>monetum</i>	others <i>monetam</i>
17 <sup>th</sup>	<i>procurante</i>	<i>procuranto</i>	others <i>procurante</i>
17 <sup>th</sup>	<i>externas</i>	<i>exterar</i>	QRSP <i>exterar</i>
25 <sup>th</sup>	<i>fidelitei</i>	<i>fideliter</i>	QRS <i>fideliter</i> , others <i>utiliter</i>
25 <sup>th</sup>	<i>essent utilitati</i>	<i>esset utilitati</i>	QRV <i>essent utilitati</i> , others <i>esset usui</i>
25 <sup>th</sup>	-	<i>aboensis</i>	LMNX <i>rector scholae aboensis</i>
25 <sup>th</sup>	<i>domini</i>	-	others have <i>domini</i>

<sup>173</sup> Schmidt 1943b, 55.

<sup>174</sup> Schmidt 1943b, 55.

28 <sup>th</sup>	<i>letatensis</i>	<i>letalensis</i>	QRS <i>letalensis</i>
------------------	-------------------	-------------------	-----------------------

From this list it really becomes clear, as Heininen correctly argued, that V is higher in the *stemma* than S.

### 7.1.2. Manuscript Q in the *stemma*

Also ms Q is hard to place. Heininen placed it between V and S, but his argumentation for this hypothesis is not particularly strong. He thinks that Q is a copy of V because the scribe of Q confused letters e and i when copying from V, thus changing *patena* to *patina* and *regnante* to *regnanti*.<sup>175</sup> Nevertheless, as it is commonly known, errors like these are very common, and they tell us nothing about the relationship of the manuscripts. Letters e and i were often confused and not used in a very systematic manner.<sup>176</sup> Heininen also listed five variants which show that V is higher in the *stemma* than its copies Q and S: *ipsi* (QS *qui*), *consolationi* (QS *consolationes*), *finlandiam* (QS *finlandicam*), *betingh* (QS *belingh*) *de piratis* (QS *despiratis*). The first of these is a mistake by Heininen: Q reads *ipsi*. The fourth one is also a very irrelevant variant, a personal name which can accidentally be spelt similarly by Q and S. Also the fifth seems quite doubtful (only the space and *s* are missing), leaving us only with two variants. As will be seen later, these are not enough.

With a quick glance it would seem that Q could fit in quite nicely between V and S as Heininen claims. However, in many cases Q seems to fit quite poorly between V and S and it would seem very unlikely that Q is a copy of V and S's exemplar. In many cases Q seems to have a different variant while V and S have the same. If Q was between V and S, it would be peculiar if S for instance added a word back after Q had omitted it. Below there are some examples of this situation:

Table 5

Location	V, S	Q
Prol.	<i>nos qui quondam</i>	<i>nos quondam</i>
Prol.	<i>in reditu</i>	<i>in reditu suo</i>

<sup>175</sup> Heininen 1988a, 37, footnote 13.

<sup>176</sup> Cameron 1987, 229.

Prol.	<i>nomina et vitam</i>	<i>nomina et vitas</i>
17 <sup>th</sup>	<i>canonici</i>	<i>canoci</i>
17 <sup>th</sup>	<i>ejus</i>	<i>suus</i>
17 <sup>th</sup>	<i>ad ejus suggestionem</i>	<i>ab ejus suggestionem</i>
17 <sup>th</sup>	<i>perpetua</i>	<i>perpetuata</i>
17 <sup>th</sup>	<i>anno 1425</i>	<i>anno domini</i>
17 <sup>th</sup>	<i>sacellanus dominus bero</i>	<i>sacellanus suus dominus bero</i>
17 <sup>th</sup>	<i>requisivit</i>	<i>acquisivit</i>
17 <sup>th</sup>	<i>exortas</i>	<i>exortus</i>
25 <sup>th</sup>	<i>factus ejus cancellarius</i>	<i>factus est ejus cancellarius</i>
25 <sup>th</sup>	<i>ut populo finlandico</i>	<i>ut in populo finlandico</i>
25 <sup>th</sup>	<i>audivisti</i>	<i>audivistis</i>
25 <sup>th</sup>	<i>prasesente archiepiscopo</i>	<i>preasente domino archiepiscopo</i>

These variants quite clearly demonstrate that ms Q cannot be placed between V and S in the *stemma*. In addition to these variants there is one variant in particular which makes placing Q into the *stemma* confusing. In the 17<sup>th</sup> bishop the sentence ‘*Domum etiam lapideam pro residentia praebendati constitui fecit*’ is problematic, because Q (and Eo and Ec) is the only manuscript, which has not replaced ‘*praebendati*’ with ‘*praelati*’. This is quite extraordinary, and difficult to explain. One could argue that there is a contamination here from another manuscript, but if this was the case, how come Q did not correct the numerous omissions it made in the text according to this same manuscript? It is much more likely that Q is in fact a copy of another manuscript, not S or V, which had ‘*praebendati*’. Q should be placed under  $\pi$ , but under a different branch than V and S (see the *stemma* above).

### 7.1.3. Newly discovered manuscripts Gb and R in the *stemma*

Moreover, today two new manuscripts have been discovered by the author, which Heininen did include in his work and did not know about: R and Gb. Placing these into the *stemma* requires us to look into the variants in more detail and also to check separative errors in the manuscripts against each other. Separative errors are most helpful in this task, as with these we can for almost certainly exclude some copy-exemplar relationships.

In the case of manuscripts Gb, Q, R, S and V, one can find two omissions, which can be seen as separative errors, in R against the others. In the 25<sup>th</sup> bishop, R has omitted the word ‘*quotidie*’ in the following sentence: ‘*Edidit enim in suo rectoratu precatzionale*

*finnonicum, quod in finnonum quotidie manibus teritur*'. When copying from R, it would be quite impossible to figure out that this word is missing, and basically any adverb could be placed there instead of *quotidie* (=‘daily’). Another and even clearer separative error is in the end of the 25<sup>th</sup> bishop. The part omitted by R is underlined:

*Redeuntibus autem illis, ex ruthenia pace confirmata, correptus est magister michael morbo in itinere, neque enim antea satis firma erat valetudine. subitanea igitur morte in itinere in pago kyroniemi, paroecia nykyrkio in domino obdormivit, qui tandem viburgiae sepultus est die lunae post dominicam palmarum, praesente domino archiepiscopo et multis aliis.*<sup>177</sup>

---

This omission would be quite hard (or impossible) to reconstruct by a copyist, who probably would not even notice that it is missing. This makes it very unlikely, or almost impossible, that R was the exemplar of QSV.

---

<sup>177</sup> But when they were coming back from Russia after confirming peace, Master Michael became ill during the voyage, and his health had not been good enough before either. So suddenly dying during voyage in the village of Kyröniemi, in the parish of Nykyrk, he slept away in the Lord, and he was finally buried in Viborg in the presence of the archbishop and many others.

In addition, when we look at certain variants, it seems clear that R is older than V, Q or S:

Table 6

Loc	R	V	Q	S	Comments
Prol	<i>ac discretis</i>	<i>et discretis</i>	<i>et discretis</i>	<i>et discretis</i>	as mentioned above, all the other manuscripts have ' <i>juxta ac discretis</i> '
Prol	<i>nostrum</i>	<i>nostrorum</i>	<i>nostrorum</i>	<i>nostrorum</i>	all the other mss have ' <i>nostrum</i> '
Prol	<i>ab alienati</i>	<i>ab alienati</i>	<i>abalienati</i>	<i>abalienati</i>	all the other mss have <i>ab alienati</i>
Prol	<i>praedecessores</i>	<i>ante-cessores</i>	<i>ante-cessores</i>	<i>ante-cessores</i>	all the other mss have <i>praedecessores</i>
17 <sup>th</sup>	<i>in reditu</i>	<i>in reditu suo</i>	<i>in reditu</i>	<i>in reditu</i>	also P omitted <i>suo</i> , not others
17 <sup>th</sup>	<i>hyemali</i>	<i>hyematur</i>	<i>hyematur</i>	<i>hyematur</i>	others <i>hyemali</i> , <i>hyemale</i> (B) or <i>hyemavit</i> (N)
17 <sup>th</sup>	<i>sibi</i>	<i>illi</i>	<i>illi</i>	<i>illi</i>	others <i>sibi</i>
17 <sup>th</sup>	<i>praelati</i>	<i>praebendati</i>	<i>praelati</i>	<i>praelati</i>	others <i>prelati</i> , Eo and Ec <i>praebendati</i>
17 <sup>th</sup>	<i>suus</i>	<i>ejus</i>	<i>ejus</i>	<i>ejus</i>	others <i>suus</i> , Eo and Ec <i>suis</i>
17 <sup>th</sup>	<i>abo</i>	<i>aboe</i>	<i>aboe</i>	<i>aboe</i>	others <i>abo</i>
17 <sup>th</sup>	<i>ejus</i>	<i>suus</i>	<i>ejus</i>	<i>ejus</i>	others <i>suus</i>
17 <sup>th</sup>	<i>parentalae, et</i>	-	-	-	others <i>parentibus</i> , M omitted
17 <sup>th</sup>	<i>taetae laudabilis</i>	<i>tanta laudis</i>	<i>tanta laudis</i>	<i>tanta laudis</i>	others <i>fama laudabilis</i>
25 <sup>th</sup>	<i>manibus</i>	<i>quotidie manibus</i>	<i>quotidie manibus</i>	<i>quotidie manibus</i>	All the other mss have



					<i>manibus quotidie</i>
--	--	--	--	--	-----------------------------

Furthermore, ms R is the only one of these four manuscripts, which in the 17<sup>th</sup> bishop uses the word *hyemali* instead of *hyematur* in the sentence: ‘*Hic in reditu Parisiis hyemali*’. All the other manuscripts in this branch of the *stemma* read: ‘*Hic in reditu suo Parisiis hyematur*’. In fact, only Eo and Ec have ‘*hyematur*’, all the other manuscripts ‘*hyemali*’. This would seem to indicate that R is not a copy of Q, R or S, but of another manuscript, which still had ‘*hyemali*’. Therefore R’s place in the *stemma* should be under  $\pi$ , next to the branches of Q and VS.

Gb seems to represent a different sub-branch of  $\pi$  as Q, R, S and V. Its version of both the 27<sup>th</sup> and the 28<sup>th</sup> bishop is longer (and in the case of the 28<sup>th</sup> bishop also the only one which is a full version, going all the way until the bishop’s death.)<sup>178</sup> Gb also omitted some words<sup>179</sup>, making it unlikely to be the exemplar of any of the other manuscripts in the branch. It is more likely that it is a copy of  $\pi$ , which omitted some words, while V made the omissions in the beginning of the 27<sup>th</sup> bishop and in the end of the 28<sup>th</sup>.

Table 7

Loc	Gb	R	V	Q	S	
27 <sup>th</sup>	<i>pro memoria de episcopo et autore paulo justen</i>	<i>paulus juusten</i>	<i>paulus juusten</i>	<i>paulus juusten</i>	<i>paulus juusten</i>	
27 <sup>th</sup>	<i>factus est postea episcopus</i>	<i>factus est episcopus</i>	<i>factus est postea episcopus</i>	<i>factus est potea episcopus</i>	<i>factus est postea episcopus</i>	
28 <sup>th</sup>	<i>magister ericus erici letalensis</i>	<i>ericus erici letalensis</i>	<i>ericus erici letatensis</i>	<i>ericus erici letalensis</i>	<i>ericus erici letalensis</i>	
28 <sup>th</sup>	<i>archi- episcopum</i>	<i>in archi- episcopum</i>	<i>in archi- episcopum</i>	<i>in archi- episcopum</i>	<i>in archi- episcopum</i>	
28 <sup>th</sup>	<i>fuit hic oriundus....</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	

<sup>178</sup> The 27th bishop has in the beginning of Q, R, S and V: ‘*Paulus Juusten...*’ while Gb starts: ‘*Pro memoria de episcopo et autore Paulo Justen*’. In the 28th bishop Q, R, S and V end in the inauguration of the bishop, while Gb covers also his death.

<sup>179</sup> In the 28th bishop ‘*magister*’ and ‘*in*’.

As the table above suggests, Gb's place in the *stemma* is also under  $\pi$ , next to the branches of Q, R and SV. Gb clearly seems to be deriving from another branch of the *stemma*: it is either earlier than Q, R, S or V or represents a different version

## 7.2. Other manuscripts under *hyparchetype* $\delta$ (Ec, Eo and P)

Let us now examine the other manuscripts under the *hyparchetype*  $\gamma$ . As explained above, these manuscripts are actually more related to the manuscripts under the other *hyparchetype* ( $\beta$ ) than to the group of GbQRSV, but *stemmatologically* they nevertheless derive from the same branch (see above the list of variants under the *stemma*.) We shall start with manuscripts Ec and Eo, as their position will be differing from the rest quite a bit. Let us begin with the differences Eo and Ec have, in order to be able to place them into the *stemma*.

### 7.2.1. Ec and Eo

In the *stemma* shown above, manuscripts Ec and Eo are placed under the *hyparchetype*  $\gamma$  and its hypothetical copy, manuscript e. This is due to the variants marked with '4' in the *stemma* and in the list of variants (see above.). The two variants marked with '3' and '4' caused a split in the tradition: into e and b. From b derives manuscript P and (possibly via several intermediary manuscripts) the group of GbQRSV. From e a very poor copy was made (Eo) which was later corrected by someone else (Ec). This explains how Eo and Ec share some variants with the group of GbQRSV (the ones that already were present in  $\gamma$ ). However, one should remember that it actually shares much more with P and the other manuscripts than with GbQRSV (because a lot of chances occurred after the split of b and e.) In this chapter the position of Ec and Eo is explained in detail and also compared to the assumptions made by earlier scholars.

Wolfgang Schmidt thought that ms E was influenced by both of the main groups (SV against the rest). In his opinion E's link to VS is backed up by the following similar readings: *Vestgothus*, *Olandensis*, *Gregorii Balck*, *Lydicks*, *Finlandia*, *translatus*, *licet*

*invite, translati sunt psalmi, magno esset usui.*<sup>180</sup> The last four of these are very good examples of significant variants, whereas the others are not. Schmidt had a very traditional and un-methodological approach to the variants: he was simply looking for spelling mistakes, almost exactly like Porthan in the 18<sup>th</sup> century. This means that he did not really think which variants could simply be different (regional, chronological) ways of spelling the same word, and which could really be such that they could be used to discover links between the manuscripts.

Heininen mentions that E is a contaminated manuscript, and it seems that the scribe has been trying to overcome the difficulties found in the original (L) by comparing it to V.<sup>181</sup> E is indeed a special case in the sense that it has been corrected, ie. some words are overlined and rewritten, and as mentioned above in chapter 5, these are made with a different handwrite and with a different ink than the original. Therefore it is necessary to see whether the original version of E, i.e. Eo, can be grouped differently than the corrected version of E, Ec, in terms of variants. If Ec is closer to Q, R, S or V than Eo, this naturally implies that the scribe who made the corrections indeed had either Q, R, S or V at his/her disposal and made the corrections according to that information.

There are some cases where Ec shares variants with different manuscripts than Eo.

---

<sup>180</sup> Schmidt 1943b, 56.

<sup>181</sup> Heininen 1988a, 3. Heininen 1988b, 40.

Table 8

Loc	Variant in Eo (and other manuscripts)	Variant in Ec (and other mss)	Comments
Prol	<i>curovibus</i> (B)	<i>curonibus</i> (others)	
Prol	<i>consolationi</i> (others)	<i>consolationis</i> (-)	QS <i>consolationes</i>
Prol	<i>non a danica</i> (Q)	<i>non ac a danica</i> (-)	Others <i>non et a danica</i>
25 <sup>th</sup>	<i>praestanta</i> (-)	<i>preastanda</i> (G)	All the other manuscripts have ' <i>praestanda sedulo</i> '
27 <sup>th</sup>	<i>adscendit horum</i>	<i>ad studia horum</i> (G, Lb)	Heininen ' <i>ad studia literarum</i> '
27 <sup>th</sup>	<i>christianorum</i> (-)	<i>christianae</i> (G, Lb)	
27 <sup>th</sup>	<i>in</i> (-)	<i>nunc ex</i> (G, Lb)	
27 <sup>th</sup>	<i>audita</i> (-)	<i>aulica</i> (G, Lb)	
27 <sup>th</sup>	<i>hi</i> (-)	<i>ne</i> (G, Lb)	
27 <sup>th</sup>	<i>sponmunda</i> (-)	<i>spontaneam</i> (G, Lb)	
27 <sup>th</sup>	<i>abbrevismo</i> (-)	<i>beanismo</i> (G, Lb)	
27 <sup>th</sup>	<i>vi</i> (-)	<i>quod</i>	

The first example proves nothing, only that B made the same mistake as Eo and this was corrected by Ec<sup>182</sup>. The second is the only one where the correction of Eo seems to be made (poorly) according to Q or S (not V!). In the third variant it seems that someone noticed that something is missing in Eo (the word 'and') and therefore added '*ac*', not knowing that the other manuscripts had '*et*'. The rest of the variants in the table would imply (contrary to the assumption made by Heininen) that the corrections made to ms Eo were made according to G or Lb, not V. As will be mentioned later, some of these corrections according to Lb or G should be taken into account, as they can be used to place Eo and Ec in the *stemma* in relation to G and Lb. Apart from this, however, Eo and Ec will not be placed in different branches of the *stemma*. Earlier it was mentioned that this might be necessary, but after the detailed look of variants above, this is no longer the case.

We can also strongly argue against Heininen's assumption of E being corrected according to V, which it clearly is not. It seems more likely that someone noticed the very obvious mistakes made by Eo, and corrected these, without checking them from

<sup>182</sup> This correction could have been made according to any other manuscript, or even independently, as the word *curonibus* refers to the people *curones*, which might have been familiar to the author of Ec.

any other manuscript, and thus creating contamination from it. It is equally possible that the corrections were made according to some other manuscript, which is now lost, and cannot be linked to the survived manuscripts.

Where should we then place these manuscripts? As shown earlier, Heininen also argued in his 1988 edition that ms E is a poor copy of Ms L.<sup>183</sup> This argument is not, however, supported by any evidence. Already in the text of the 17<sup>th</sup> bishop alone, one can find three clear *errores separativi* in Ms L, which quite clearly demonstrate that L is *not* the exemplar of E.

- 1) Ms L has '*magister tragensis*', not '*magister pragensis*', which is correct and is what Eo and Ec have.<sup>184</sup> Mss Eo and Ec's '*magister pragensis*' (master of Praga(=Prague)) makes sense, unlike '*magister tragensis*' (master of Traga(?)).
- 2) Ms L has incorrectly '*domum etiam lapideam pro residentia praelati constitui fecit*' whereas mss Eo and Ec have correctly '*domum etiam lapideam pro residentia praebendati constitui fecit*'
- 3) Ms L has an incorrect name '*jacobus detmarus ad töffsalo*' whereas mss Ec and Eo have correctly '*de töfsal*'. The preposition *de* is correct 'from', not *ad* 'to'.

As explained above, Ms E is *full* of all sorts of errors. Therefore it is very unlikely that the one who made spelling mistakes with very basic Latin words, knew to correct '*tragensis*', '*praelati*' or '*ad*'. It is much more likely that E was copied (poorly), not from ms L, but from another manuscript, which had not made the three errors mentioned above. All of the manuscripts analysed have either some of these three, or other similar *errores separativi* against Ms E to prove that that they are not E's exemplars:

#### Ms B

- E has '*pragensis*' not '*tragensis*'.
- E has '*hyemali*', not '*hyemale*'. The same as above applies here.
- E has '*residentia praebendati*', not '*residentia praelati*'.
- E has '*clericorum*', not '*cleriorum*'.
- E has '*johannis*' not '*johannes*'.

---

<sup>183</sup> Heininen 1988a, 40.

<sup>184</sup> Ms L. Linköpings stifts- och landsbibliotek. B 24, f. 5r.  
Ms E. KB. Eng. B. IX:1:45, f. 6v.

#### Ms D

- E has '*pragensis*' not '*tragensis*'.
- E has '*residencia praebendati*', not '*residencia praelati*'.
- E has '*de töfsal*', not '*ad töffsalo*'.
- E has '*evangeliare*', not '*evangelicare*'.

#### Ms G

- E has '*pragensis*' not '*tragensis*'.
- E has '*residencia praebendati*', not '*residencia praelati*'.
- E has '*competentibus*', not '*compentetenbus*'
- In the case of ms G, one must also mention that Eo cannot be its copy, because it has '*in*' instead of '*nunc ex*'. It would be impossible, even for Eo, to make this mistake. Ec, however, has corrected this.

#### Ms Lb

- There are no separative errors in Lb against Ec.
- In the case of ms Lb, one must also mention that Eo cannot be its copy, because it has '*in*' instead of '*nunc ex*'. It would be impossible, even for Eo, to make this mistake. Ec, however, has corrected this. This will be analysed further in the following chapter.

#### Ms M

- E has '*residencia praebendati*', not '*residencia praelati*'.
- E has not omitted '*parentelae et*' in the sentence: '*quanta bona non tantum stipulentus suis amicis et parentelae et generaliter ac communiter omnibus exhibuerat*' It is very unlikely that E added these two words.
- E has correctly '*ipsi meministis repetentes veterum monimenta*' not '*iterum monimenta*', like M. It is again very unlikely that E corrected this.

#### Ms N

- E has '*residencia praebendati*', not '*residencia praelati*'.
- E has '*beatissime recordationis*', not '*beatissime memoriae*'. It is very unlikely that E changed the word, but rather that it copied from some other manuscript, which had '*recordationis*'.
- E has '*translati sunt psalmi*', not '*traslatum est*'. The same applies here as above.

#### Ms P

- E has '*residencia praebendati*', not '*residencia praelati*'.
- E has kept '*devote*', unlikely added by E.
- E has '*vespertinas*' not '*vesperas*'. It is very unlikely that E changed the word, but rather that it copied from some other manuscript.

Ms Q

- E has kept '*superfecit et ipsum altare*', unlikely invented by E
- E has kept '*et parentelae*'
- E has kept '*competentibus*', unlikely invented by E

Ms R

- E has kept '*superfecit et ipsum altare*', unlikely invented by E
- E has '*residentia praebendati*', not '*residentia praelati*'.
- E has kept '*competentibus*', unlikely invented by E

Ms S

- E has kept '*superfecit et ipsum altare*', unlikely invented by E
- E has '*residentia praebendati*', not '*residentia praelati*'.
- E has kept '*competentibus*', unlikely invented by E.

Ms V

- E has kept '*superfecit et ipsum altare*', unlikely invented by E
- E has '*residentia praebendati*', not '*residentia praelati*'.
- E has kept '*competentibus*', unlikely invented by E.

Ms X

- E has '*residentia praebendati*', not '*residentia praelati*'.
- E, which has '*evangelizare*', not '*evangelicare*'.
- E, which has kept '*finnonibus*', unlikely added by E

Thus, using the Lachmann–Maas method and *errores separativi*, one can quite clearly see that neither Eo nor Ec is a copy of any of the other manuscripts. Ec could possibly, however, be a copy of Lb, but this is not possible for technical reasons: Lb is part of L, of which Eo or Ec are not copies. However, Ec *can* be a copy of Lb's or G's exemplar, which will be analysed later.

One must also make sure that Eo and Ec are not the exemplars of any of the other manuscripts. This can be seen from the list below, which clearly shows which variants distinguish Eo and Ec both from the QRSV as well as the other manuscripts. Let us start

with manuscripts Q, R, S and V, which have been dealt with earlier. There are many variants in Eo and Ec, which clearly show that they belong under a different branch of the *stemma*. The clearest variants are the following omissions, which are *errores separativi* and would have been impossible to reconstruct by Eo or Ec, if they were copying from Q, R, S or V:

- *'et post hanc vitam apud eum in aeternum vivat'*.
- *'superfecit et ipsum altare'*.
- *'competentibus'*.

However, as seen above when dealing with the hyparchetype  $\pi$ , Ec and Eo also share some variants with the group QRSV:

- omission of *'licet invite'*.
- *'recordationis'* instead of *'memoriae'*.
- *'translati sunt psalmi'* instead of *'translatum est'*.

These variants are also *errores separativi* against all the other manuscripts, and therefore Eo and Ec cannot be their copies either. They must be placed under a different sub-branch as both QRSV and the rest of the manuscripts. As there are only the variants, which Eo and Ec share with QRSV, it is very likely that these variants occurred in the early stages of the *stemma* (see the *stemma* above.) Later on, more variants occurred when the sub-branch under  $\pi$  emerged. This would explain how Ec and Eo include some same variants as QRSV, but in other respects are much closer to the other manuscripts.

Also, Ec and Eo have made the following omissions, which are unique, made by no other manuscripts:

- *'in tenebris gentilitatis nostrae vivebamus'*.
- *'inchoando usque ad summam missam terminando statuit'*.
- *'inter optimates et regni consiliarios velut alter joseph, magnus et re et nomine per tria regna aquilonaria reputatur. hic'*.
- *'praesente archiepiscopo et multis aliis.'*



These clearly demonstrate that Eo and Ec cannot be the exemplars of *any* of the other manuscripts in the *stemma*, and must be placed alone under e.

Previously ms E has been considered as a contaminated manuscript, which has been influenced by both of the main branches of the *stemma*. Heininen claims<sup>185</sup> that ms E is a copy of ms V and also Schmidt implies<sup>186</sup> that E is influenced by the  $\overline{\text{second}}$  branch of the tradition (SVA). It is not impossible to  $\overline{\text{accept}}$  what Schmidt<sup>187</sup> (and Heininen in his translation) argued that ms E is a copy (a rather interesting one)  $\overline{\text{of}}$  the lost Brenner Codex (Br), like Ms L. This is possible, because of the fact that we can no longer say which variants Br had. If Br shared the same variants with QRSV as E did, E could be its copy. If not, (which is much more likely<sup>188</sup>), E should be seen as belonging to a sub-branch of  $\gamma$  (under hypothetical manuscript  $\overline{\text{e}}$ ), as one can see from the *stemma*.

### 7.2.2. Manuscript P's position in the *stemma*

In this *stemma* P's position is seen in a rather different way than what both Schmidt and Heininen thought. In Schmidt's view (see above chapter 6.3.) P can be placed under the hyparchetype  $\beta$  and being a copy of a lost manuscript (ms Po). Heininen placed P in various, slightly obscure, ways, as explained in chapter 6.4. In this study, as one can see from the *stemma* above, P is placed under hyparchetype  $\gamma$ . This argument is based on the variants of ms P. As shown in the *stemma* and the table below it, P shares a variant numbered 3 with the group GbQRSV, but differs from it in variants numbered with 5. Variant marked with 3 (*dicitur erexisse* not *dicitur quod erexit*) is very likely to have occurred already with b, and was copied to P as well. This variation is a very important one, as it is not only one word or a short omission; it changes the sentence's grammatical structure completely and therefore can be used as a significant error.

As this variation is also such that it emerged in the very early stages of the *stemma*, it explains the difficulties both Heininen and Schmidt had in placing P into the *stemma*: the fact that the variant occurred very early makes P's connection to other manuscripts look tricky, even though it really is not. For the same reason manuscript P is in reality

---

<sup>185</sup> Heininen 1988a, 3. Heininen 1988b, 40.

<sup>186</sup> Schmidt 1942, 56.

<sup>187</sup> Schmidt 1942, 95. Heininen 1988b, 31.

<sup>188</sup> von Nettelblatt's edition is believed to be based on Codex Brenner, and as E is not related to that, it is also unlikely that E was related to Codex Brenner.

much closer to the other manuscripts than the group of GbQRSV or Ec/Eo, even though it is under the same hyparchetype as they are.

One also needs to remember that P does not include the whole chronicle (only 23 bishops) and therefore the comparison is only done with the prologue and the 17<sup>th</sup> bishops. Nevertheless, this is enough material to be quite confident with the way it is placed into the *stemma* in this study.

### 7.3. Under hyparchetype β

#### 7.3.1. D, G and L

Let us now continue with the left branch of the *stemma*, under hyparchetype β, and try to place the rest of the manuscripts. When looking into the variants one can clearly see that these manuscripts form two main groups: DGL and BMNX. The former of these groups is very clear, while the latter is slightly more varied, and can possibly be divided into further sub-branches. It is easier to start with the clear branch of DGL and then move on to the bigger group.

When looking at the variants, one can easily spot the group of G, D and L. The following variants support this hypothesis:

- ‘*pro hac*’ against ‘*pro hac immensa*’.
- ‘*finlandiae*’ against ‘*finlandicae*’.
- ‘*modo*’ against ‘*tantum*’.
- ‘*ad töfsalo*’ against ‘*de töfsalo*’.
- ‘*et praecipuus*’ against ‘*ac praecipuus*’.
- ‘*erexit*’ against ‘*extitit*’.
- ‘*capitulum*’ (also N) against ‘*capitaneum*’.

These variants are quite clear, and they can all be seen as *errores conjunctivi*, ones that are very unlikely made independently. It is much more likely that D, L and G are all descending from the same manuscript (in this *stemma* marked with a.) It is naturally

also possible that there are intermediary manuscripts which are between these manuscripts, but they nevertheless clearly form a group, which is depicted in the *stemma*. It is also possible that D and L have omitted the last bishop (the 27<sup>th</sup>, Juusten) and G has kept this. This is represented in the *stemma* by placing a hypothetical manuscript, d, above D and L and under a (d omitted the 27<sup>th</sup> bishop, both D and L followed while G copied everything from a).

### 7.3.1. Lb and contamination in G

Under this same sub-branch should also be placed the end of manuscript L, i.e. manuscript Lb. Ec, Eo, G and Lb all include a similar version of the 27<sup>th</sup> bishop, which is completely omitted by most of the manuscripts (B, D, L, M, P, X) and some manuscripts have a very different, much shorter version of it (Q, R, S, V, Gb and N.) However, one must be careful not to draw the conclusion that G and Lb are closely linked to Eo and Ec. They are in many ways not, and disagree in many variants (many of which can also be seen as separative errors).

As mentioned above, there is a separative error in Eo, which quite surely makes it clear that it is not a copy of Lb: Eo has 'in' instead of 'nunc ex'. It would be impossible, even for Eo, to make this mistake and on the other hand Lb could not figure out what exactly is wrong, even if it noticed that 'in' is not the correct word in the sentence. Therefore it is very unlikely that Eo is a copy of Lb or vice versa. Ec, however, has corrected this word, and the reading is 'nunc ex'. This means that Ec *can* be the copy of Lb (but not of L, of course) and also Lb could be a copy (contamination) of Ec or the other way around.

What comes to G, there could be a contamination here as well: G has taken the 27<sup>th</sup> bishop from Ec, Lb or (more likely) from some other manuscript, which is from this same branch. It cannot have taken it, nevertheless, from Eo, as the *error separativus* of 'in' – 'nunc ex' prevents this. However, as G is not in any other ways influenced by Ec, it is much more likely that its end is either a copy of L (to which it is closely related otherwise as well) or of another, unknown manuscript, which also had this version of Juusten, the 27<sup>th</sup> bishop. This option has been represented in the *stemma*: G is seen as a copy of manuscript a, which is also the ancestor of d, D, L and Lb. It therefore seems

likely that the addition to L was made according to G, thus creating Lb. Also Ec could have corrected Eo according to G or its ancestor.

### 7.3.3. B, M, N and X

The rest of the manuscripts also form a group, but it is not as clear as DGL. The following variants are shared by all of them:

- '*pro hac immensa*' against '*pro hac*'.
- '*finlandicae*' against '*finlandiae*'.
- '*tantum*' against '*modo*'.
- '*de töfsalo*' against '*ad töfsalo*'.
- '*ac praecipuus*' against '*et praecipuus*'.

As one can see, the group shares less important variants together than DGL, but still enough to show that they belong together. Some of the manuscripts, however, are clearly more distinctive than others. Our next task is to discover how these manuscripts are related and how they should be placed into the *stemma* within this group.

Using *errores separativi* it is clear that M is not the exemplar of any of the other manuscripts, because of these variants:

- M has '*dare*' instead of '*pro dote*' in the sentence '*eidem monasterio vallis gratiae pro dote in perpetuo assignavit*' the verb '*dare*' can be seen as a mistake, but a copyist most likely could not have changed it correctly 'back' to '*pro dote*'.
- M has '*notabiles causas*' instead of '*rationabiles causas*'.
- M has omitted '*parentibus, et.*'
- M has omitted '*et quid unoquoque tempore acciderit*'.
- M is the only manuscript which has at the end of the prologue the following sentence: '*Dispensatores ecclesia sancta fideles semper habet, quo fit domini promissio firma*'.

M can, however, be a copy of any of the other manuscripts. Because M shares one variant with the group QRSV, it is possible that it is closer to the split of  $\beta$  and  $\pi$ , where these variants arose. This is represented in the *stemma*: M is a direct copy of c, whereas X and B are placed under f and h, both copies of c.

Heininen claims in his *stemma* (in the edition) and in his translation, that manuscripts B and X are copies of a lost manuscript, which is the copy of hyparchetype  $\beta$ .<sup>189</sup> If this was the case, then mss B and X should share more *errores conjunctivi* or *variants* together than with any other mss. This is not, nevertheless, the case. Heininen gives in his edition six variants which B and X share against L and N<sup>190</sup>. The problem here is that Heininen compares B and X only to L and N, whereas the comparison should be done against the *whole* group, i.e. DGLMN. In Heininen's comparison, only four of the variants is shared only by B and X, while the rest are also shared with other manuscripts, and D and G have not been taken into account at all. In this study only one variant of importance was discovered which is shared *only* between X and B: they both have in the prologue '*descripta*' instead of '*descriptas*'. This one example is not, nevertheless, enough to prove that they belong together. They also disagree in two variants which have been used above to group the manuscripts:

- B has *christianismum*, X *christianissimum*
- B has *evangeliare*, X *evangelicare*

Also, in the 26<sup>th</sup> bishop, X has made an omission (underlined): '*ibi etiam positor fuerat beanorum*'. This omission would have been quite hard to amend by B, although it is not a particularly strong *error separativus*. B and X can be either seen as copies from the same manuscript as the rest of the group BMNX or as copies of two separate intermediary manuscripts under (Br) or  $\beta$ .

N is also distinctive in some cases. It is the only manuscript which has the following variants:

- '*hyemavit*' against '*hyemali*' (DEcEoGLMPRX) or '*hyematur*' (QSV)
- '*extruixit*' against '*extitit*' (BEoEcMNQRSVX) or '*erexit*' (DGL)

---

<sup>189</sup> Heininen 1988a, 42, 45. Heininen 1988b, 31.

<sup>190</sup> Heininen 1988a, 41.

It seems that both of these demonstrate quite well the fact that N is an edition: it has corrected the text to make it better and more correct. However, it is very difficult to estimate whether more changes and corrections have been made or not. Without seeing the exemplar of N it is quite hard to put forward anything else than good guesses about its contents. However, N can in many ways represent some sort of version of the so called Codex Brenner. In the next chapter this question can also be dealt with the numerous computer-assisted methods.

What becomes clear from this *stemma* is that previous scholars had placed many of the manuscripts in a way which can be seriously questioned. Heininen's decision of omitting manuscripts D, E, G and S cannot be seen as a good one to start with (the manuscripts can still be important, even if not maybe from a strictly Maasian perspective). This study also proved that they are not in fact even any lower in the *stemma* than some of the other manuscripts which were included in Heininen's *stemma*. Unlike Heininen argued, E cannot be seen as a contaminated copy of L or its ancestor, D and G are not merely useless copies of L and Q is not an insignificant copy of V.

Analysing the manuscripts in detail also made it clear to distinguish Gb from G and Lb from L, which was done by neither Schmidt nor Heininen. This offered new possibilities for the stemmatological analysis and for example links between L, G and E could not have been discovered without making the distinction between L and Lb. In a similar way Gb offered new ways of internal comparison within the group QSV. The discovery of a new manuscript, R, also changed the *stemma* and opened new ways of approaching the group QSV. This discovery is also a very clear demonstration of the fact that more manuscripts of this type of a chronicle can be found quite easily using the possibilities offered by modern communications technologies. A bit of determination and luck is needed as well, of course!

## 8. Stemmata using computer-assisted methods

As explained in chapter 4, six different computer-assisted stemmatological methods have been used in this thesis. These methods and their results will be explained below and also compared to the manually created *stemma*. One must remember that all of the stemmata created by these methods are unrooted trees. This means that the programmes only group the manuscripts according to the variants, without any suggestions about which manuscript is the oldest, closest to the archetype, best or anything like that. This must be done by a stemmatologist who is able to see how well a particular graph created by a computer goes along with other information about the texts and their manuscripts.<sup>191</sup>

---

In some of the trees also some numbers are shown. These numbers indicate the so-called bootstrapping figure. Bootstrapping means that the programme tries to place each of the texts into the *stemma* several times. If in all of the cases the text is placed under a certain branch this means that the programme is really sure about its placement and gives as a bootstrap figure 100. Similarly, if the figure is 50 or below, the programme is not that sure about how the *stemma* should be created. Bootstrapping figure can thus be used, to some extent, as an indicator of the programme's accuracy for that particular branch of the *stemma*.<sup>192</sup>

---

### 8.1. Phylogenetic Analysis Using Parsimony, maximum parsimony (PAUP-mp)

PAUP is software developed by David L. Swofford from the Smithsonian Institution, Washington DC. Its basic idea is expressed in a very clear way in the User Manual for version 3.1:

‘PAUP is a program for inferring phylogenies from discrete-character data under the principle of *maximum parsimony*. Parsimony methods search for *minimum-length trees*, trees that

---

<sup>191</sup> All graphs were drawn by PhD Teemu Roos and M.A. Yuan Zhou except for the Roelli-Bachmann – method, in which PhD Philipp Roalli drew the *stemma*.

<sup>192</sup> For more information about bootstrapping see Felsenstein 1985 and Efron & Tibshirani 1993.

minimize the amount of evolutionary change needed to explain the available data under a prespecified set of constraints upon permissible *character* changes.<sup>193</sup>

---

The principle of parsimony (also known as Occam's razor) is very important to cladistic classification, and therefore also to stemmatology. The basic idea of this principle is that the fewest changes of states is always the most likely option when considering the most likely phylogenetic tree.<sup>194</sup> In stemmatology this can be explained with an example from Juusten's chronicle. A sentence about the translation of psalms is written in two different ways in the manuscript tradition: eight manuscripts have *translati sunt psalmi* and eight have *translatum est*. In this case, it is more likely that the scribe of one manuscript wrote *translati sunt psalmi* instead of *translatum est* and that all manuscripts which have *translati sunt psalmi* are descending from this manuscript (in this case the manuscript which we call *hyparchetype* γ.) It could of course theoretically also be possible that this same change happened twice, by two different people, which would make some of the manuscripts with the same reading not to be related, but according to the principle of parsimony this is very unlikely because then more changes of state would occur.

The results gained by PAUP-mp are very similar to the ones obtained manually. As one can see in the *stemma* below, there are only some differences and they are not very significant. It is very important to point out that this method places those manuscripts which are hard, or impossible to place, around a central node (in this case M, Lb, P and N). This does not mean, unlike in traditional stemmata, that the program suggests that they are all copies of the same manuscripts. If one interprets the graph in this way, very wrong results will be gained. What can be seen from this tree is that the method is really sure about the existence of group GbQRSV (just like the traditional, manual method in chapter 7) because the bootstrapping number is 100 in that branch. In the same way the programme is absolutely sure about Eo and Ec belonging together and almost sure (number is 99) about the other manuscripts being closely related. The relationships within this group are not that certain, as one can see in the figures of the branches of the tree. The same goes for the relations among the group GbQRSV, the method is not absolutely sure about them.

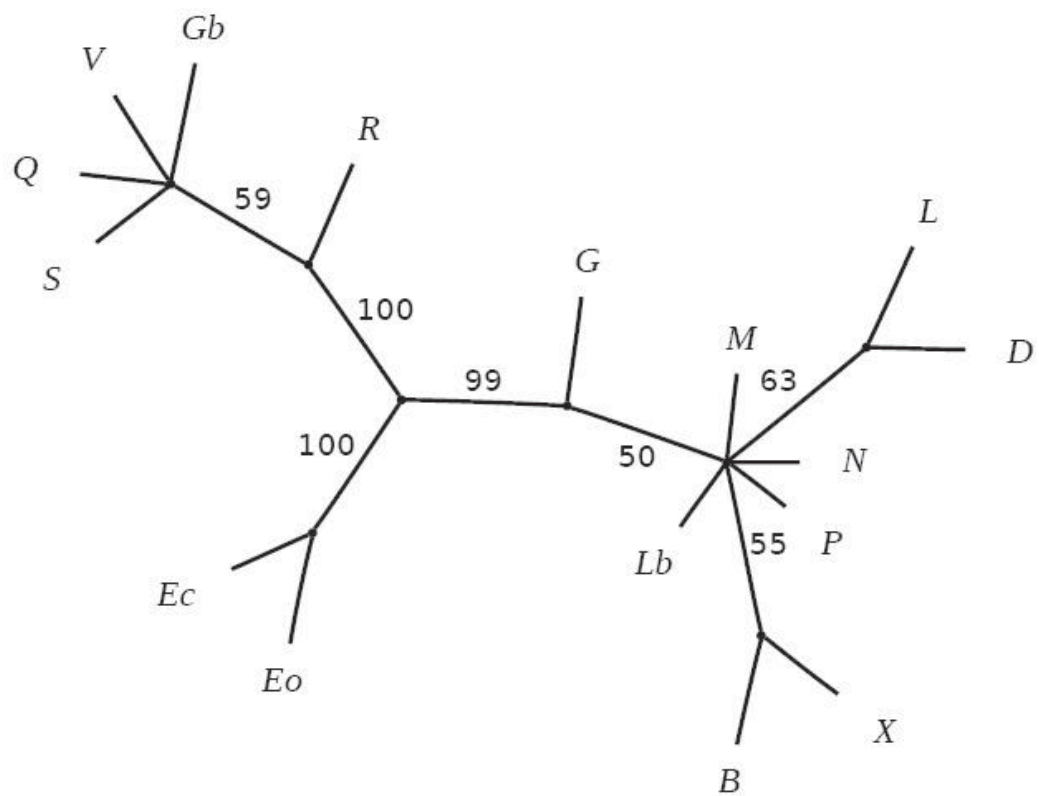
---

<sup>193</sup> PAUP User's Manual 3.1. [http://paup.csit.fsu.edu/Paup\\_Doc\\_31.pdf](http://paup.csit.fsu.edu/Paup_Doc_31.pdf).

<sup>194</sup> Barton et al. 2007, chapter 27, page 17.



Figure 11



As mentioned above, this graph is not oriented which means that any of the manuscripts could theoretically be the *archetype*. However, in the case of this graph, one should start to look for the ancestor of all of the other manuscripts somewhere in the middle of the graph. G's ancestor, the central node surrounded by M, N, P and Lb as well as the ancestors of Ec/Eo, B/X and L/D could all be good candidates. The same goes also with the node just above the ancestor of Ec/Eo and the left from the ancestor of G.

## 8.2. Phylogenetic Analysis Using Parsimony, neighbour-joining (PAUP, NJ)

The neighbour-joining method, developed by Saitou & Nei in 1987, has a slightly different way of reconstructing phylogenetic trees than PAUP using maximum parsimony.<sup>195</sup> Its principle is to ‘-find pairs of operational taxonomic units (OTUs [=neighbours]) that minimise the total branch length at each stage of clustering of OTUs starting with a starlike tree.’<sup>196</sup> This means that unlike in maximum parsimony, in the NJ the algorithm has an inside built system of searching for the correct tree, making the whole process of creating a phylogramme shorter and easier. It always pairs two taxa (or texts in the case of stemmatology), eventually creating a tree.<sup>197</sup>

The results obtained by this method are quite close to the ones that were obtained manually but there are also two main problems. As one can see in the *stemma* below, the main differences are the following:

- a) Gb is placed incorrectly<sup>198</sup> next to B, X and M.
- b) Eo and Ec are placed incorrectly as descending from the other manuscripts and as being examples of L and Lb.

These mistakes are most likely due to the way the method deals with the data. Gb is a very short text indeed, and therefore it is very hard to pair it with any of the other manuscripts. For this reason it is, most likely very randomly, placed next to B, but it could be placed anywhere else just as well.

The wrong placement of Eo and Ec can be explained in a similar way. Because Ec, Eo, G, L and Lb all have a very similar version of the 27<sup>th</sup> bishop, the NJ-method pairs them as neighbours. However, as we know, this is a false illusion: as explained above, there is no way Eo and Ec can be placed in this way (they are not the exemplars nor copies of any of the surviving manuscripts.) In this case it seems that the way NJ works is not

---

<sup>195</sup> Saitou & Nei 1987, 406–425.

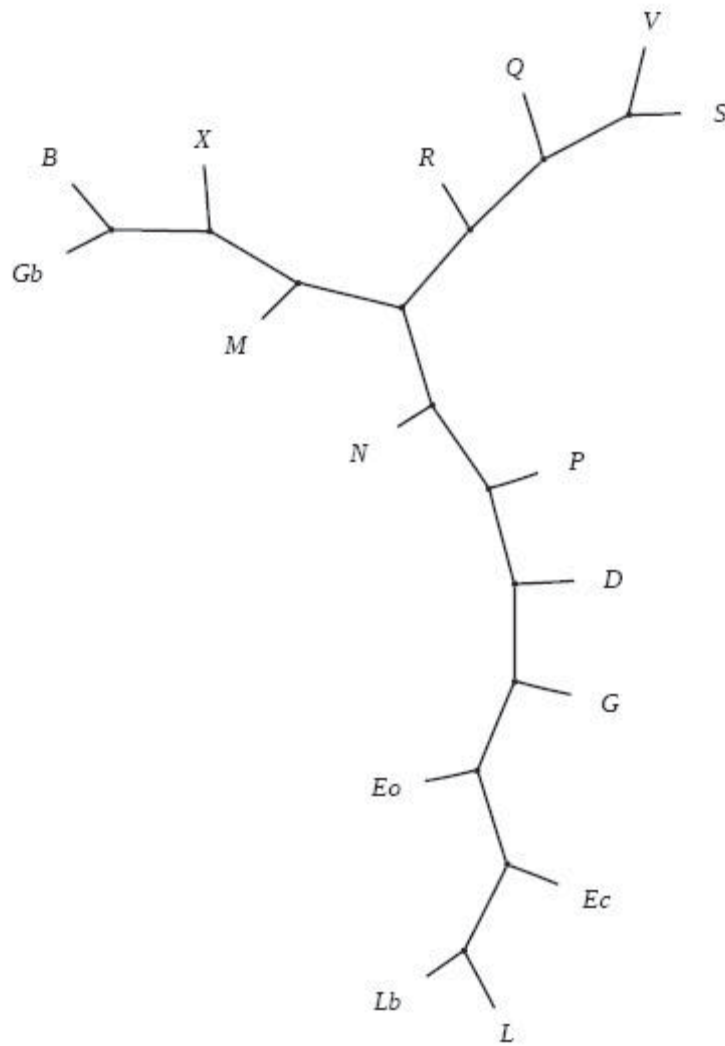
<sup>196</sup> Saitou & Nei 1987, 406

<sup>197</sup> Barton et al. 2007, chapter 27, page 23.

<sup>198</sup> In this case one can really say ‘incorrectly’, because ms Gb only includes the 27th and the 28th bishop, which are not included in B, M or X.

very suitable for creating *stemmata*, as the advantages of neighbour-joining will give misleading results.

Figure 12



### 8.3. RHM, bootstrapping on

The RHM-method was developed at the University of Helsinki in 2005 by computer scientists Teemu Roos and Petri Myllymäki and historian Tuomas Heikkilä for creating stemmata of manuscript traditions.<sup>199</sup> The method is very similar to PAUP-mp, but the main difference is that it does not compare single words but groups of words instead.<sup>200</sup> For example, PAUP-mp would not see similarities between two sentences which include the same words but in different order. Because it compares each of the words separately, it will consider two sentences very unlike if the words do not match. RHM, on the contrary, sees the similarity because it looks at the texts in groups of words, and the groups are in these cases very similar, only the order being different, not the words. This can have major advantages because in many cases order of words can be a relevant variant which can determine copy-exemplar relations (though not always). In some cases a mere change of order of words can still mean that the texts are closely related, but of course in some cases this can also very much change the meaning of the sentence, thus (possibly) placing an obstacle.

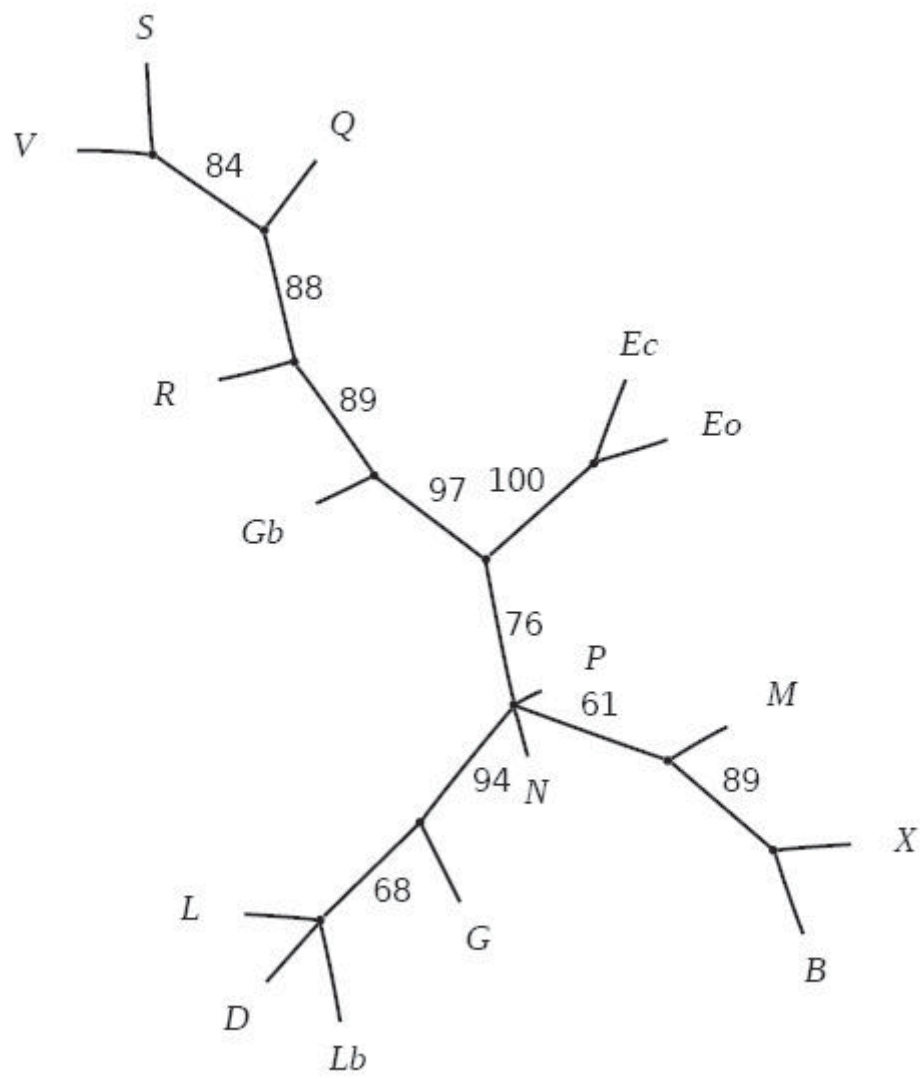
As one can see in the graph below, the results gained by RHM are very similar to the ones that were achieved manually. It seems clear that RHM very well mimics the way of grouping the manuscripts the present author has also used. In this graph exactly the same main groups have been identified as in chapter 7. RHM even agrees with the manual method about how to place the manuscripts within the group GbQRSV (S and V under one manuscript, Q, R and Gb each under other manuscripts). It also places P and Ec/Eo close to this group and identifies the other sub-groups as well (L, D, G, Lb), (B, M, X, N). In this graph the *archetype* would be between P and N. This could make sense because P is one of the oldest survived manuscripts and N is widely thought to be a copy of manuscript which was very close to the *archetype* (Codex Brenner).

---

<sup>199</sup> Roos & Heikkilä 2009.

<sup>200</sup> Roos & Heikkilä 2009, 433

Figure 13



## 8.4. Splitstree

Splitstree is a programme developed by Daniel H. Huson and David Bryant. Like the programmes above, it also creates a graph (a phylogramme), but not really a tree. It takes into consideration the possible relations as well, thus creating several branches where the programme is unsure which one is the correct one. Because of this the picture it gives about the relationships of the different texts, for example, is not as clear as with, say, PAUP-mp, but on the other hand it might be more realistic. It also makes the branches longer when differences are greater, thus also making the graph visually more accurate.<sup>201</sup>

---

Both of these features can be seen in the graph below. Manuscripts Gb and Lb are placed very far away from the others, as well as from each other (they are different in size as well as in terms of variation). Gb and Lb are both very short texts and that is why they are placed so far away from all the other manuscripts (each missing word counts as a difference). However, as we know, Gb and Lb are both very short, but also very different (they share almost nothing together) and therefore they are placed at the opposite ends of the graph. In a similar way it places Q, R, S and V very close to each other (they are very similar indeed) and does the same for M, N, P and X, which are indeed closely related. Also Ec and Eo are, very correctly, placed quite far away from all the other manuscripts.

Nevertheless, the way Splitstree places manuscripts also has some problems. It places G and L very closely together but leaves D out of this group. This is a different way of creating a *stemma* than the manual method, but it is quite hard to find a good explanation for this. It also places B next to the group QRSV, which is quite odd, and very difficult to explain.

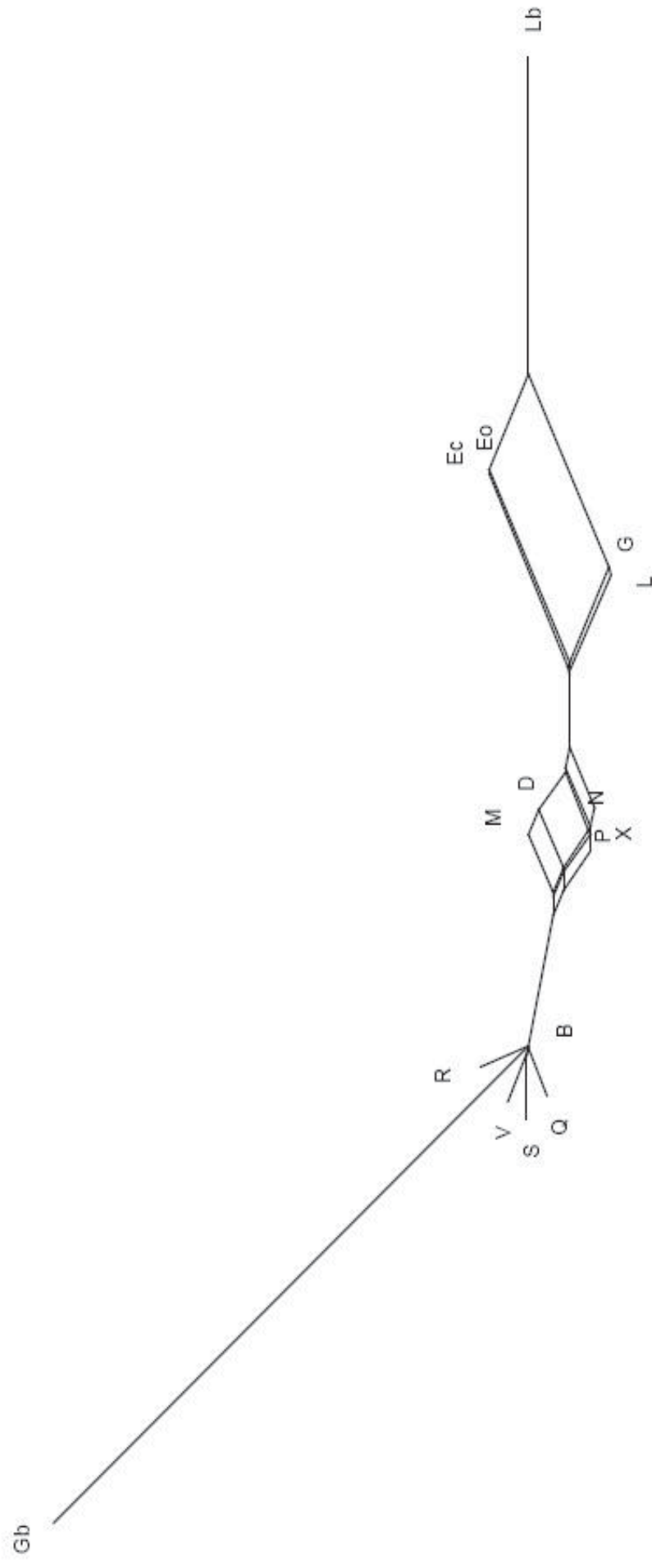
It is also worth noticing that Splitstree seems to identify the contamination in manuscript L (which created manuscript Lb). As one can see in the graph, it suggests that Lb can be the copy of either G or Ec/Eo, which very well represents the possible contamination in L (the extra part added to L, creating Lb.) This part can only be found in manuscripts Ec, Eo, G and Lb, and Splitstree seems to have spotted this. In this respect it works better than RHM or PAUP-mp (and also PAUP-nj, even though that

---

<sup>201</sup> For details about Splitstree see Huson & Bryant 2006.

also placed Ec, Eo, G, L and Lb very close to each other, see above.) This is a major advantage and it could help a stemmatologist a great deal: seeing such a graph could suggest a contamination and make the stemmatologist go through these texts very carefully in order to analyse the possible contamination in more detail.

Figure 14





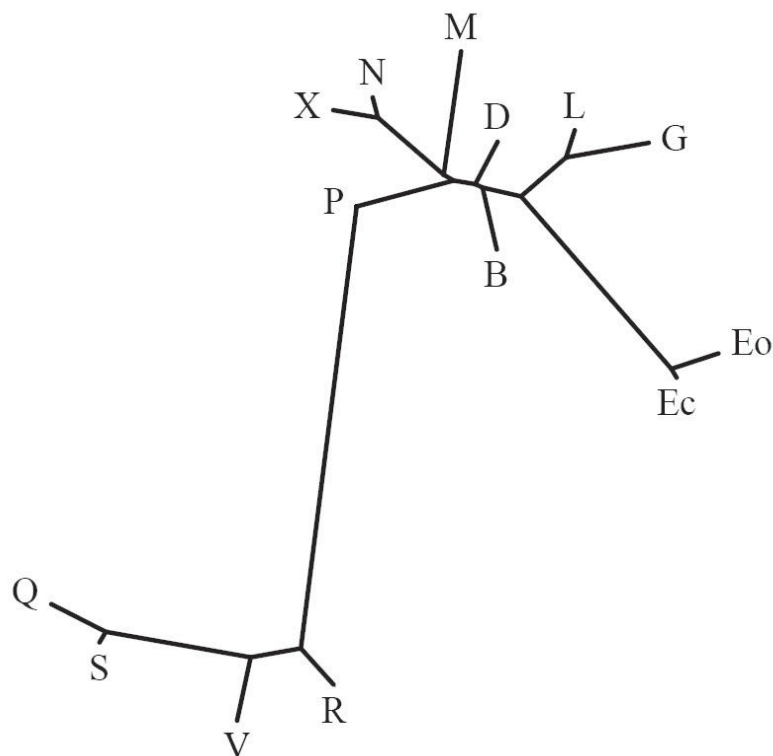
In this graph one could find the *archetype* either between B and the big group, anywhere among the big group, or B could also be the *archetype*.

## 8.5. Roelli–Bachmann

This method was created by Philipp Roelli and Dieter Bachmann at the University of Zürich in 2010.<sup>202</sup> Like the methods described above, it uses distance matrices to calculate the relationships of the manuscripts. Its difference is, however, that it puts more weight on certain variants, which would also count as *errores significativi* in Maasian textual criticism. This is done manually by the scholar (in this case Philipp Roelli), who chose some of the variants as significant ones, and gave them more weight than to the other variants.

The graph created by this method is very similar to the *stemma* created manually:

Figure 15



<sup>202</sup> Roelli & Bachmann 2010. Online publication at <http://www.zora.uzh.ch/34542/>.

As one can see, there are no major differences in this method compared to the manual *stemma*. One difference is, of course, that some manuscripts are missing (Gb, Lb) which were too short to be taken into account by this method. Another difference is the place of Q in the *stemma*. In chapter 7.1. it was suggested that ms Q should be placed directly under  $\pi$ . However, it is equally possible to place Q in the way Roelli-Bachmann method did: under the node from which both V and the exemplar of S and Q depart. This would simply mean that the changes in Q occurred after the creation of V and S.

Another difference is an alternative way of grouping manuscripts BDGLMNPX. As was already discovered manually, they are all related, and should be placed under the same node, which in this case would be the node just right of P. The pairings within the group can be seen as rather irrelevant ones (the manuscripts are anyhow closely related so that the difference is not very important). The place of ms P should also be specially mentioned. This method would suggest that it is very much in between the two main branches, and that P would be closer to QRSV than for example Eo and Ec. This is very close to the solution given by the manually created *stemma*: P indeed shares some variants with QRSV. However, as pointed out already earlier, P is in reality much more related to the other manuscripts, and the similarities between it and QRSV are in the very early stages of the *stemma*. It is nevertheless very significant indeed that Roelli-Bachmann –method was able to detect this link between P and QRSV, unlike many other methods used to draw the *stemma*. It shows how great an importance just a few variants may have, and how they can prove links between the manuscripts in the early stages of the *stemma*, even though the surviving manuscripts at the end of the branches are not that related, like in the case of P and QRSV. The *stemma* also visualises this very clearly as the branch between P and R is much longer than the one between P and B.

However, this method still placed Eo and Ec close to L and G, unlike the manual *stemma*. This is most likely because they include the similar version of the 27<sup>th</sup> bishop, and even the method did not see the significant errors which distinguish Ec and Eo from L and G. This indicates that even in a combined method like this, where the scholar ‘assists’ the computer, some variants are not necessarily picked up. On the other hand this also shows how easily manual methods make mistakes, which makes improving computer-assisted methods even more important.

## 8.6. Semstem

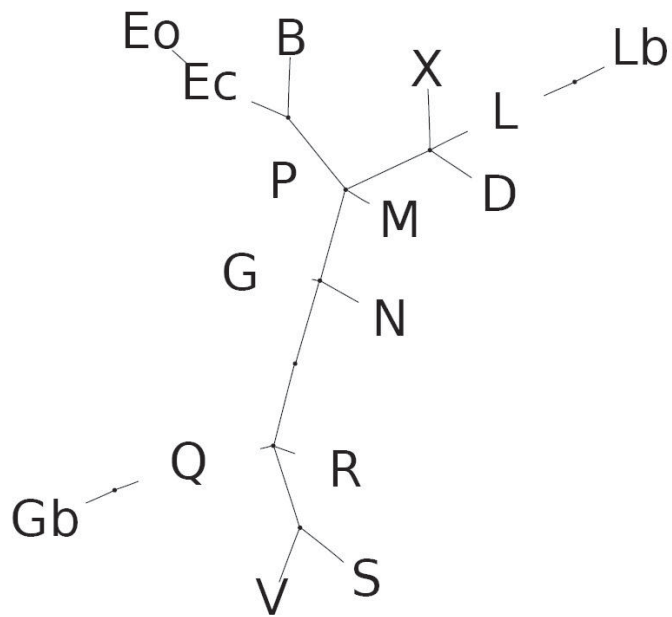
Semstem is a new method developed in the University of Helsinki by the STAM-project, led by computer scientist Teemu Roos.<sup>203</sup> One of its major advantages is that it does not only produce bifurcating trees, unlike the other methods. This means that Semstem can place single manuscripts as ancestors to other manuscripts (see the graph below, manuscripts L, P and Q). This is a much more realistic approach than for example PAUP-mp has.

In the *stemma* created by this method one can again clearly distinguish two main groups: GbQRSV forms the first one and the other is formed by the rest of the manuscripts. This division can be seen as a correct one, but the *stemma* also has some problematic features. One of the problems is how Eo and Ec are placed. It seems that the programme acknowledges that they are very different than the others (and similar to each other), but it places them rather interestingly. Semstem seems to suggest that they are closest to ms B, which is not at all how the manual method saw the situation! In a similar way P is not placed closest to the group GbQRSV, like the manual method suggested. It seems that Semstem does not pay attention to the difference in significance that the variants have, and thus places the manuscripts in this fashion.

---

<sup>203</sup> STAM-project's webpage: <http://cosco.hiit.fi/Projects/STAM/>.

Figure 16



## 9. Conclusions

As explained in chapter 6, none of the previous editors and translators of the chronicle had focused on the stemmatological aspects of Juusten's chronicle. Heininen's edition did touch this topic, and gave a fairly good introduction to the history and study of the chronicle, but he was not really focusing on stemmatological methodology. Since his edition methodology and different approaches to stemmatology have evolved so rapidly that a new study was needed, and more study will be needed in the future as well. In this study it has become clear that both of the previous translators/editors of Juusten's chronicle, Schmidt and Heininen, had created a *stemma* which was correct in its way of dividing the manuscripts into two main groups. However, the ways they both placed the manuscripts within the two main branches can be seen as insufficient and even incorrect. This has been clearly demonstrated both by a detailed analysis of the variants by traditional methods as well as by the computer-assisted methods.

In this study it has become apparent that certain very important aspects must be taken into consideration when creating a *stemma* of a text like Juusten's chronicle. Special attention must be given on the methods chosen to create a *stemma* and in particular on the interpretation of data and the variants discovered. The manuscripts chosen for analysis, the length of the text, the dating of the manuscripts, the palaeographical and codicological aspects of the manuscripts, the quantity and quality of the variants and selection between them all play a major role in the process. Very wrong conclusions will be drawn (and have been drawn previously) from the material if these are not fully acknowledged.

Like this research, all stemmatological research should start with the assembly of all surviving manuscripts. The approach taken earlier by some scholars, (eg. Maas) where one tries to drop some of the manuscripts out already in the early stages of the work, cannot be accepted, at least in the case of historical research. The habit of choosing some manuscripts or one manuscript as the archetype or its representative can be a good approach if one only tries to create an edition, without further ambitions. Even in the case of simply creating an edition one can also argue that a really good and critical edition would include all of the manuscripts. In this way the reader can use the edition for thousands of purposes (historical, philological, stemmatological etc.) and make his

or her own interpretations, which would not be limited by the editor who chose to leave some of the variants out because of their ‘obvious’ faults.

Similarly this work began with finding all of the known manuscripts and even some new ones. A new manuscript (R) was found surprisingly easy after persistent archival research. When databases and online sources develop further, finding ‘lost’ manuscripts can become easier and easier and scholars could and should use this opportunity. In this study also some of the already known manuscripts were analysed in detail. This led to the discovery and separate analysis of parts of the manuscripts which had been ignored by earlier scholars (mss Gb and Lb). If the objective is (like in this thesis) to gather all available information, one cannot ignore parts of the manuscripts, even though they initially look irrelevant.

Once all the manuscripts have been tracked down, starts the laborious but rewarding work of transcription and comparison. A special care must be taken when transcribing, as the errors made in this process will affect everything in the future (just like errors made by the copyist when copying the manuscripts!) When comparing the texts and the variants, some important aspects must be taken into account. One of these is how to deal with differences in spelling, such as i/e, ae/e, u/v, uu/w, j/i and so on. In this work a simple solution was taken: each word was transcribed in a similar way in all of the manuscripts. This would not be a good solution when making a critical edition (where all the different variants should be visible, also in this case), but for stemmatological purposes this approach is more useful, as keeping the original spelling might create false results from a stemmatological point of view. The same goes for names, which also should be normalised and not taken into account as variants (unlike eg. Schmidt and Heininen did.)

Once one has erased the variants caused by differences in spelling, one should choose which variants count as significant ones. Special attention must be paid into how one decides which variant is a relevant one. This requires knowledge of the language, the text and the historical circumstances. One must decide whether one is searching for separative and conjunctive errors, or simply shared variants between the texts. In this study an approach in the middle has been chosen: the main division into groups was done by merely calculating shared variants but some clear separative errors were also taken into account (e.g. relevant omissions which would be impossible to reconstruct

and changes in grammatical structure of the sentence). This is, however, very difficult to succeed without being subjective. How can one decide which omission could not have been reconstructed or which grammatical structure could not have been changed back? The answer unfortunately remains that one cannot, at least with 100% certainty. But this does not mean that no valuable information can be obtained. History, or even stemmatology, is not merely a natural science with yes/no answers. There are a lot of things which are simply lost, gone in the past beyond our reach. One cannot know why someone in the 17<sup>th</sup> century Sweden wrote *in Parisiis hyemali* and not *hyematur*; the person is dead and he left no explanation. We can only have well argued guesses and hypothesis, never the correct answer about what really happened. This is surely accepted by all historians, if not all stemmatologists.

In this thesis, quite a few important results were gained by using certain variants as separative errors when manually creating the *stemma*. When choosing the variants the author used the best information available when making the judgement. Instead of manually choosing the separative errors, one can, and should, of course always use the computer as well. Unlike the human mind, the computer never makes mistakes; it never chooses the wrong variant. However, the programmer does make mistakes and therefore the computer-assisted *stemmata* can be, and often are, incorrect. It might seem very obvious that a special care must be taken when programming the computer, but this is not obvious at all. As explained above, the different programmes are quite distinctive in the way they create *stemmata*. The *stemma* created by the programme depends totally on how the programme is made and how it compares the texts, and therefore one should not rely on the programme before either comparing it to a manual *stemma* (if the text is short enough to do that) or making sure that the programme is made according to the wishes of the stemmatologist. The programme might for example not pay attention to omissions at all<sup>204</sup> which would give misleading results compared to the manually created *stemma*, where omissions sometimes have a vital role as *errores separativi*.

Another important factor considering the use of computer programmes is the visualisation the programme uses. Programmes which only create bifurcating trees are quite obviously misleading to start with, and one should acknowledge this when looking

---

<sup>204</sup> This was found out during a lunch with Dr Roos in Cambridge. The author wrote a *stemma* gained by the computer on a napkin and wondered how it can have such results, taken into consideration all the omissions which are clearly separative errors. To this Dr Roos replied that the programme had until now simply ignored the omissions and clearly some re-programming was needed!

at the graphs. In a similar way programmes which do not show possible intermediary nodes can give an over simplistic view of the situation. Another aspect is the length of branches. Most programmes do not automatically make the branch longer when there are more differences between the texts, but instead one should count the intermediary nodes. In this study the best results (or results closest to the manual *stemma*) both in terms of correct grouping and best visualisation were gained by PAUP-mp and RHM. This means that they very well mimic the way the manuscripts can also be grouped manually. This does not mean, of course, that they represent historical truth, which would be very difficult (not to say impossible) to achieve. However, they do demonstrate that similar results can be obtained both manually and with computers. When and if this is the case, one could save an awful lot of time by letting the computer create the tree of the manuscript tradition so that the scholar could focus on the information that the computer cannot deal with.

The size of the text must also be taken into account. In this thesis, some 2600 words of the text were chosen to be analysed (roughly one third of the whole chronicle.) It is absolutely clear that the more text can be taken into account, the more accurate the results will be. However, transcription and analysis of the material takes an enormous amount of time, in particular if there are more manuscripts than in the case of Juusten's chronicle. In this case, however, one can feel fairly comfortable with the solution chosen here: the material analysed was selected from different parts of the text (beginning, middle and end) and is long enough to make it unlikely that the *stemma* would change dramatically if more material was taken into account. Had one taken the same amount of text, but only from the beginning or from the middle of the chronicle, however, the results could have been misleading.

In this study a good approach seemed to be that one takes a small part of the text (in this case about 2600 words) and makes a manual comparison and *stemma* out of this material. This can then be compared to various computer-assisted methods in order to see which programme gives the best solution compared to the manual *stemma*. After the comparison one should evaluate both the manual methods used and the programming the computer had in order to make both better. Once an agreement between the two has been reached, one can feel fairly comfortable that the results gained by the computer with the whole text will be quite similar to the ones gained if manually creating a *stemma*. One can now simply transcribe the entire text and let the computer make the



*stemma*. Of course also in this one should not simply blindly rely on the results gained by the computer without checking them. Nevertheless, in this way one can actually create a *stemma* using the entire text (with all of the manuscripts and all their variants), without either having to drop something out or spend one happy lifetime comparing the variants and drawing a *stemma* manually.

After gaining the *stemma* one should re-check it and make sure that it is not in contradiction with palaeographical, codicological or historical information. This might seem quite obvious, but after spending a few months staring at different computer graphs and comparing the variants these things are easily forgotten and with a bit of bad luck the variants might suggest a totally wrong *stemma*. For this reason all historical information about the manuscripts should be taken into account already at the very beginning of the process. In this study two such cases occurred where historical facts overruled textual comparison: the special conditions of manuscripts Gb and Lb could have been completely ignored and the manuscripts placed totally wrongly into the *stemma* without taking into consideration the clear palaeographical and codicological differences they had compared to manuscripts G and L.

In the future the stemmatological study of Juusten's chronicle could be continued in several ways. The first step would be to continue the search for more manuscripts and after that to make a full transcription of all of the surviving manuscripts. These transcriptions could then be used to make several computer-assisted *stemmata*, which could be compared to the current one. This comparison would give even better results than the comparison done in this thesis. If possible, one could also try to make a manual *stemma* out of the entire transcribed data, but this would be a very long and hard process in which one must really love stemmatology in order to succeed.

Also the codicological, palaeographical and philological work connected with the creation of Juusten's chronicle should be continued. In codicology one could for example try to track down the origin of the numerous watermarks the manuscripts have and try to identify the paper used in them. One could in a similar way do more research in the palaeography of the manuscripts, aiming at more precise and accurate dating. The same goes for the language: regional and chronological variation in spelling could reveal us a lot of information concerning the manuscripts and via that the entire *stemma*.

A new, updated and full critical edition would also be useful. Heininen's edition already includes the basic text, which might be enough for a casual reader, but for the purposes of future research it is not adequate. A new edition is needed, which takes into account all the manuscripts and all their variants. This edition should also include the latest developments in stemmatology as well as a detailed codicological, palaeographical and philological part, explaining the differences the manuscripts have, also visually as much as possible. Also a more detailed history of the chronicle, of Juusten and of previous research is needed. All of this should also be written in English so that the edition is easily understandable to as many people as possible and to link the study of historical texts in Finland to the various stemmatological research projects conducted around the world. With international cooperation the study of stemmatology, and through it the knowledge of old texts, could increase considerably.

## 10. Sources and Literature

### Archive sources

Linköping (Sweden), Linköpings stadsbibliotek, sifsbibliotekssamlingen.  
B 14

Porvoo (Finland), Borgå gymnasiums bibliotek.  
11 879.

Stockholm (Sweden), Kungliga Biblioteket.  
Rål. Fål. 77.  
D 28.  
Eng. B. IX:1:45.  
Eng. B. IX:1:46.  
A 915.

Stockholm (Sweden), Riksantikvarieämbetet, Stockholm. Vitterhetsakademiens  
handskriftssamling.  
F16:14

St. Petersburg ( Russia). Biblioteka Nauka.  
Lat. Q.I.N.810

Uppsala (Sweden), Uppsala universitetsbibliotek.  
E32 X 153.  
E32 T 70.

Östersund (Sweden), Jämtlands Läns Bibliotek  
Z 11

## Printed sources

- Heininen 1988a Paulus Juusten. *Catalogus et ordinaria successio episcoporum Finlandensium*. Edidit Simo Heininen. Suomen kirkkohistoriallisen seuran toimituksia 147. Helsinki 1988.
- Heininen 1988b Heininen, Simo 1988b. *Paavali Juusten. Suomen piispainkronikka. Suomennokset ja selitykset Simo Heininen*. Suomalaisen kirjallisuuden seuran toimituksia 476. Pieksämäki.
- Messenii Chron. Ep. Chronicon Episcoporum per Sveciam Gothiam & Finlandiam. Cuilibet successiue dioecesi, ab anno DCCCXXXV ad praesentem vsque MDCXI praesidentium vitam complectens. A Johanne Messenio. Stockholmiae Anno MDCXI.
- von Nettelblatt 1728. Christian von Nettelblatt. *Schwedische bibliotec I*. Stockholm.
- Porthan 1799. Henrik Gabriel Porthan M. Pauli Juusten chronicon episcoporum Finlandesium. Turku.
- Porthan 2005. Henrik Gabriel Porthan. *Opera Omnia*. Edidit Porthan-seura.
- Schmidt 1942. Schmidt, Wolfgang 1942. *Paulus Juusten och Finlands gamla biskopskrönika*. Bro. Turku.
- Schmidt 1943b. Schmidt, Wolfgang 1943b. 'Handskrifter till Finlands gamla biskops krönika.' *Historisk Tidskrift för Finland 1943–1945*. Helsinki. Mercators Tryckeri 1944.

## Literature

Barton, Briggs, Eisen, Goldstein & Patel 2007. *Evolution*. Cold Spring Harbor Laboratory Press, NY.

Bédier, Joseph 1970 [First edition 1929]. *La Tradition de Lai de L'Ombre. Réflexion sur L'Art d'Éditer les Anciens Textes*. Librairie Honoré Champion, Paris.

Bischoff, Bernard 1990. *Latin Paleography. Antiquity and the Middle Ages*. Cambridge University Press. Cambridge.

Bordalejo, Barbara 2003. *The Phylogeny of the Order in the Canterbury Tales*. New York University. Online at <http://www.bordalejo.net/theses.html>.

Brown, Michelle P. 1990. *A Guide to Western Historical Scripts from Antiquity to 1600*. The British Library. London.

Campbell, Neil A. & Reece, Jane B. (eds.) 2005. *Biology. Seventh Edition*. Pearson Benjamin Cummings.

Donaldson, E. Talbot 1970. *Speaking of Chaucer*. The Athlone Press. London.

Dunphy, Graeme 2010a. 'Chronicles (terminology)' in Dunphy, Graeme (ed.) *Encyclopedia of the Medieval Chronicle*. Brill, Leiden.

Dunphy, Graeme 2010b. 'Chronicles' in Classen, Albrecht (ed.) *Handbook of Medieval Studies*. Walter de Gruyter Berlin/New York.

Efron, Bradley & Tibshirani, Robert 1993. *An introduction to bootstrap*. Chapman & Hall. New York & London.

Felsenstein, Joseph 1985. 'Confidence limits on Phylogenies: an Approach Using the Bootstrap.' in *Evolution* 39(4), pp. 783–791.

Fery-Hue, Françoise 2007. 'L'organisation du volume.' in Géhin, Paul (ed.). *Lire le manuscrit médiéval*. Armand Colin. Paris 2007.

*Glossary for the British Library Catalogue of Illustrated Manuscripts*.  
<http://www.bl.uk/catalogues/illuminatedmanuscripts/glossary.asp>

Heikkilä, Tuomas 2005. *Pyhän Henrikin legenda*. Helsinki. Suomalaisen kirjallisuuden seura

Heikkilä, Tuomas 2009a. *Piirtoja ja kirjaimia. Kirjoittamisen kulttuurihistoriaa keskiajalla*. Suomalaisen kirjallisuuden seura/WS Bookwell. Porvoo.

Heikkilä, Tuomas 2009. 'Kirjalliset lähteet ja stemmatologia'. *Keskiajan avain*. Suomalaisen kirjallisuuden seura/WS Bookwell oy. Juva.

Heininen, Simo 1988a. *Paulus Juusten Catalogus et ordinaria successio episcoporum Finlandensium*. Suomen kirkkohistoriallinen seura, Helsinki.

Heininen, Simo 1988b. *Paavali Juusten. Suomen piispainkronikka. Suomennokset ja selitykset Simo Heininen*. Suomalaisen kirjallisuuden seuran toimituksia 476. Pieksämäki.

Heininen, Simo 1989: *Suomalaisen historiankirjoituksen synty. Tutkimus Paavali Juusten piispainkronikasta*. Suomen kirkkohistoriallisen seuran toimituksia 147. Pieksämäki.

Heullant-Donat, Isabelle. 'Chroniques, Chroniqueurs' in Vauchez, André & Vincent, Catherine *Dictionnaire Encyclopédique du Moyen Âge*. Les Éditions du Cerf, Paris 1997.

Huson, Daniel H. & Bryant, David 2006. 'Application of Phylogenetic Networks in Evolutionary Studies.' *Molecular Biology and Evolution* 23(2).

Lamberg Marko 2009. 'Latinalainen paleografia.' *Keskiajan avain*. Suomalaisen kirjallisuuden seura/WS Bookwell oy. Juva.

Lemaire, Jacques 1989. *Introduction à la codicologie*. Publications de l'institut d'études médiévales, Université Catholique de Louvain. Louvain-La-Neuve.

Lindberg, Nils J. 1998. *Paper comes to the North: sources and trade routes of paper in the Baltic Sea region 1350–1700: a study based on watermark research*. International Association of Paper Historians. Vantaa.

Lipscomb, Diana. 1998. *Basics of Cladistic Analysis*. Online at <http://www.gwu.edu/~clade/faculty/lipscomb/Cladistics.pdf>. Page 6. Quoted 13<sup>th</sup> May 2011.

Maas, Paul 1957. *Textkritik*. 3. Auflage. B. G. Teubner Verlagsgesellschaft. Leipzig.

Maliniemi, A. 1943. 'Keskiajan piispainkronikkamme ja Paavali Juusten.' *Historiallinen Aikakauskirja* 1943.

Merisalo, Outi 2003. *Manu Scripta. Länsimaisen kirjan historia keskiajalla (500–1500.)* Kampus Kustannus. Jyväskylän yliopiston julkaisusarja 69. Jyväskylä.

Muzerelle, Denis 2007. 'Colophons et souscriptions. Mentions de date, d'origine ou de copiste.' in Géhin, Paul (ed.). *Lire le manuscrit médiéval*. Armand Colin. Paris 2007.

Muzerelle, Denis 2002. *Vocabulaire Codicologique*. Online publication at <http://vocabulaire.irht.cnrs.fr/pages/vocab1.htm>.

Poirel, Dominique 2007. 'Le contenu.' in Géhin, Paul (ed.). *Lire le manuscrit médiéval*. Armand Colin. Paris 2007.

van Reenen, Pieter & van Mulken, Margot 1996. 'Prologue' in *ibs*. (eds.) *Studies in Stemmatology*. John Benjamins Publishing Company. Amsterdam/Philadelphia.

Robinson, Peter M. W. & O'Hara, Robert. 1992. 'Report on the Textual Criticism Challenge 1991'. *Bryn Mawr Classical Review* 3–4 (1992). Online at <http://rjohara.net/cv/1992–bmcr>.

Robinson, Peter M. W. 1996. 'Computer-Assisted Stemmatic Analysis.' in van Reenen, Pieter & van Mulken, Margot 1996 (eds.) *Studies in Stemmatics*. John Benjamins Publishing Company. Amsterdam/Philadelphia.

Roelli & Bachmann 2010. *Towards generating a stemma of complicated manuscript traditions: petrus alfonsi's dialogus*. Online publication at <http://www.zora.uzh.ch/34542/>.

Roos, Teemu & Heikkilä, Tuomas 2009. 'Evaluating methods for computer-assisted stemmatology using artificial benchmark data sets.' *Literary and Linguistic Computing*, Vol. 24, No. 4, 2009.

Salemans, Ben 2000. *Building Stemmas with the Computer in a Cladistic, Neo-Lachmannian, Way The Case of Fourteen Text Versions of 'Lanseloet van Denemerken'*. Nijmegen.

Saitou, Naruya & Nei, Masatoshi 1987. 'The Neighbor-joining Method: A New Method for Reconstructing Phylogenetic Trees' in *Molecular Biology and Evolution*, volume 4, issue 4.

Schmidt, Wolfgang 1942. *Paulus Juusten och Finlands gamla biskopskrönika*. Bro. Turku.

Schmidt, Wolfgang 1943a. *Suomen Piispain Kronikka*. Finnish translation by Herman Winter.

Schmidt, Wolfgang 1943b. 'Handskrifter till Finlands gamla biskops krönika.' *Historisk Tidskrift för Finland* 1943–1945. Helsinki. Mercators Tryckeri 1944.

Sidwell, Keith 1995. *Reading Medieval Latin*. Cambridge University Press. Cambridge.

Svensson, Lars 1974. *Nordisk paleografi: handbok med transkriberade och kommenterade skrift-prov*. Lund. Lundastudier i nordisk språkvetenskap. Serie A, nr 28

Tahkokallio, Jaakko 2009. 'Keskiaikainen historiankirjoitus.' *Keskiajan avain*. SKS. Suomalaisen kirjallisuuden seura/WS Bookwell oy, Juva.

Tanselle, G. Thomas 1981. 'Textual Scholarship' in Gibaldi, Joseph (ed.) *Introduction to Scholarship in Modern Languages and Literatures*. The Modern Language Association of America. New York.

Timpanaro, Sebastiano 2005. *The Genesis of Lachmann's method*. Translated and edited by Glenn W. Most. The University of Chicago Press.

Willis, James 1972. *Latin Textual Criticism*. University of Illinois Press. Urbana.

Windram, Howe, Spencer 2005: 'The Identification of Exemplar Change in the *Wife of Bath*'s Prologue Using the Maximum Chi-Squared Method. Introduction.' *Literary and Linguistic Computing* 20.

Zerdoun, Monique 2007. 'Les matériaux: support et encre' in Géhin, Paul 2007 (ed.). *Lire le manuscrit médiéval*. Armand Colin. Paris.